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INTEGRATING PROGRAMED INSTRUCTION WITH CONVENTIONAL CLASSROOM TEACHING.

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THREE PHASES OF THIS PROJECT SOUGHT TO INTRODUCE PROGRAMED INSTRUCTION INTO A ONE MONTH UNIT OF A REQUIRED HIGH SCHOOL GOVERNMENT COURSE WITHOUT RADICALLY DISTURBING CONVENTIONAL TEACHING AND ADMINISTRATIVE PROCEDURES. PHASE I DETERMINED, EXPERIMENTALLY, SUITABLE PROGRAMING TECHNIQUES. PHASE II INVOLVED ONE YEAR OF PILOT EXPERIMENTS IN THE CLASSROOMS, AND INCLUDED DEVELOPMENT OF CRITERION TEST ITEMS AND WRITING OF DETAILED LESSON PLANS. PHASE III, THE ACTUAL FIELD TEST, USED TWO TEACHERS FOR PROGRAMING AND NON-PROGRAMING CONDITIONS IN CLASSES OF TWO APTITUDE LEVELS. STATISTICAL ANALYSIS OF QUESTIONNAIRE AND TEST RESULTS SHOWED THAT PROGRAMING COMBINED WITH CONVENTIONAL INSTRUCTION SIGNIFICANTLY INCREASED THE AMOUNT OF LEARNING AT BOTH APTITUDE LEVELS AND FOR BOTH TEACHERS. STUDENT ATTITUDES TOWARD PROGRAMED INSTRUCTION WERE POSITIVE. APPENDICES TO THIS DOCUMENT INCLUDE EXPERIMENTAL MATERIALS. (LH)

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U. S. Office of Education
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Some of the preliminary phases of work under this project were conducted by Mr. D. G. Nichols, with the assistance of Mrs. Dorothy S. New. Mr. Donald F. Terry assisted with some of the data analysis, and Mrs. Ethel Kellett assisted greatly in preparing the materials for classroom use.

FOREWORD

The General Role of Programed Instruction in Education

The total gamut of current efforts to apply teaching machines and programed instruction may be classified in accordance with the intent to:

a. Make programed learning the sole means of instruction.

b. Integrate programed learning with other instructional methods.

c. Automate both the instructional and administrative aspects of school operations.

d. Use machines and programs as a device to promote sale of other materials.

An illustration of intent (a), above, would be use of programs as assignment units in correspondence courses in which there is no face-to-face interaction between student and teacher. For adult learning, if use of programs results in higher test scores than other methods of home study, this would appear to be an effective method of instructorless training.

An illustration of intent (c), above, would be the ultimate development of an automated school system such as that envisioned by Ramo (In Lumsdaine and Glaser, 1960), in which most of the instructional as well as the assignment and record-keeping functions of the school would be automated. Needless to say, if such an outcome does develop, it is in the far distant future, and whether desirable or not, the achievement of such a system would have to await first the further validation of computer-controlled instructional systems such as now are in an experimental stage (Coulson, 1962).

Concerning intent (d), above, we will omit comment here, and will now announce that the project described in this report was based on intent (b) which, in the writer's opinion, is the most fruitful area for research and development directed toward immediate educational applications.

The Purpose of the Project

The project reported here was based on the assumption that for the foreseeable future the teacher would and should have a central role in education of children in the public schools. It is therefore desirable to examine the means by which programed learning can be integrated with conventional teaching procedures in such a manner that the new and the conventional procedures are mutually facilitating in their effects upon achievement of educational objectives.

In our initial statements of project objectives we sometimes referred to our goal as that of developing an "optimum" system for introduction of teaching machine techniques into the classroom. Our deletion of the word "optimum" from the title of this report reflects more than our increasing humility. It reflects also the fact that we wished to conduct this research under the administrative conditions now typical of school system operations so that the results would be applicable immediately to present school systems.

As a consequence of the above decision, the research had to proceed without waiting to benefit from the kind of administrative and procedural changes in school operation which would ultimately take place and would further enhance the effectiveness of programed instruction. We refer to such changes as complete flexible scheduling which would permit (a) students to begin and complete courses as their rates of progression warranted, (b) ready formation of homogeneous discussion groups based on progress in programed learning, and (c) setting levels of attainment or mastery to be reached by all students, with time-to-mastery rather than amount-learned the measure of individual differences. Neither did we choose to wait for large budgets, better-trained teachers, or more equipment. Although all the above kinds of changes, when they take place, presumably will have the effect of requiring modifications from the procedures employed in this project, the results of this project, on the other hand, may suggest ways to implement programed learning under those improved conditions.

In summary, the goal of the present project has been to work within present administrative constraints in developing a workable procedure for integrating programed instruction with conventional teaching procedures. This project may thus be viewed as one contribution to the larger problem of exploring the role of the teacher and ways in which teacher roles may change as the advantages of programed instruction become a reality.

A course in high school social science was chosen for the purpose of the project. A one-month unit of the course dealing with the U. S. Federal Government formed the basis for the major experimentation.

The Phases of Project Work

Work on this project was divided into three main phases. Phase I consisted of experimental comparison of alternate programing techniques and formats for the presentation of social science materials. Experimental programs on the structure and function of the United Nations were employed in this phase in order to (a) protect security of the U. S. Government programs until major experimentation was to be undertaken; (b) utilize material similar in nature to the U. S. Government materials; and (c) be able to conduct two- or three-day experiments with a small but meaningful unit of appropriate subject-matter.

Phase II of the research consisted of brief classroom experiments designed to obtain preliminary estimates of several alternate procedures for combining study by programs with frequently-used conventional procedures. These pilot studies also permitted further analyses of the relative merits of several styles of programing.

Phase III consisted of a field test of the composite instructional procedure which was developed on the basis of total results from earlier phases of work.

Some Underlying Assumptions

Throughout the course of work on the project, several findings from earlier studies formed a sort of "apperceptive mass" which probably acted as a set of directing tendencies on the part of project personnel.

First, we assumed that combined methods of instruction were preferable to a single method. This preference, in turn, was based upon an expectation that there are probably differences among students and among subject-matters with reference to optimum mode of presentation. At least one set of results (Campbell, 1962) had suggested that a variety of presentations may stimulate students to think as they study, and that the nature of the material makes a difference in the effectiveness of various programing styles. Also, since a certain amount of repetition is assumed desirable, it was thought best that some of the repetition be between methods and not all within a method. Variety in the day's procedure was another element assumed desirable. Finally, it was suspected that teachers (probably like programers) have "pet" topics which they teach better than others. Covering similar material by two methods would then, in probability terms, be called for.

Second, we believed that a program difficulty level should be set so as to require effort (in terms of thinking, re-reading and response latency) of the student to produce the correct response (Goldbeck and Campbell, 1962; Goldbeck and Briggs, 1962). Therefore, variations from standard program procedures were tried out both for write-in programs and for multiple-choice programs. Both difficulty and format characteristics of programs were varied in the preliminary studies.

Third, we suspected that programs developed in cooperation with the teachers of the course would have some advantages over programs brought in from the "outside." Some confirmation of this appeared in the results in that topics covered adequately by both the teacher and the program resulted in high performance on relevant test items. The same results suggested that lack of matching of topics by the two methods of presentation produces lower test performance. Thus, if the teacher helps select the program topics, he is more than likely to use those in his own procedures.

Fourth, we suspected that one of the advantages of programs is that they keep attention from wandering as compared to study of textbooks. This, coupled with lack of ambiguity concerning what the student is supposed to do, should make programs successful when used as homework. Programs were used as homework in this study with a high percentage of completed assignments, and consequently participation in class by the students was improved.

Fifth, we suspected that prior successful use of programs to reinforce main points presented by demonstrations, films, field trips, etc. (Briggs, 1962), implied that, were films to be used in the experimental course unit, ways of drawing attention to the main points were needed.

Finally, we believed that a fairly direct emphasis upon the necessity for completing required study can successfully be made when there is no ambiguity as to what the requirements are and when the methods offer possibility of success as a result of making the required effort. Through the cooperation of the experimental teachers on these points, good results were achieved.

Looking Toward the Future

As the main body of this report indicates, the experimental effort to integrate programed instruction with other classroom procedures resulted in test scores significantly higher than those earned by control groups as indicated by standard statistical tests of significant differences. Judging the practical significance of the gains, of course, is usually more difficult. But it is important to notice that the statistical differences were based upon a composite procedure in which three-fourths of the classroom time in the experimental group was spent in conventional activities, while one-fourth was devoted to programed learning. This fact, of course, is consistent with the analytical finding that the lectures and the programs were mutually facilitating.

Within present classroom and school conditions, then, it has been demonstrated that programed instruction can be integrated with conventional procedures. It was not within the scope of this study to indicate how widely this should become the case in general practice, nor what the costs would be per unit of improvement in each case. But the findings, it is hoped, will be useful to educators in making judgements about these matters.

In closing the Foreword to this report, the writer would like to state that in his opinion the utilization of programed instruction by imaginative teachers could result in the opportunity for teachers to find time to develop new and challenging instructional functions. The possibility of placing dependence upon the programs to carry a significant portion of the work load should make some time available to search for these improvements. As an aid in the identification of these functions, heretofore necessarily neglected by the teacher, more research is needed in helping teachers to first try out several alternate teacher roles in the utilization of this new media. It is hoped that this study represents a small step in this direction.

Leslie J. Briggs
Principal Investigator

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INTEGRATING PROGRAMED INSTRUCTION WITH CONVENTIONAL CLASSROOM TEACHING

The purpose of this project has been to investigate and develop principles and procedures for the optimum introduction of programing into a high school course of instruction without disturbing or changing schedules or other administrative features of present school practices. Thus, the goal was to study the introduction of programed learning into classrooms in such ways as are immediately feasible in terms of teacher-pupil ratios and other current school conditions. Also, the objective was to integrate programed instruction with conventional teaching procedures. Thus, it was relevant to determine how much programing to introduce and how to integrate study by programs with total classroom activities. The emphasis is upon how the teacher functions in relation to the use of programs, rather than upon any attempt to teach the course by programed instruction as the sole method.

A U. S. Government course was selected for this research because (1) this course is required of all high school students, thereby providing a large, unselected population of students, and (2) this course represented a relatively untried subject matter area for the use of programing.

The total research for this project involved three major phases. The first phase consisted of research in variations in programing technique and format for social science materials. The second phase consisted of development and evaluation of alternative means for integrating programing with normal teaching procedures. The third phase consisted of evaluation of the effectiveness of the integrated, program-oriented instruction.

Phase I: Preliminary Studies of Alternate Programing Techniques

Early efforts on the project were concerned with exploring the efficacy of alternative programing techniques for social science materials. It was deemed unwise to embark at once upon studies of combining programs with normal procedures, since most prior research regarding program technique had been conducted in subject matter areas other than social science. Due to probable differences between physical science and social science in regard to hierarchical structure of materials and degree of independence among elements of the material, it was thought that studies in programing of social science were needed first.

Presented below are those findings that substantially influenced the mainstream development of the system for integrating programed instruction into a U. S. Government course. These preliminary studies used the structure of the United Nations as subject matter because of the apparent similarity between teaching U. S. Government and teaching U. N. organization, and because the latter was a more suitable size of unit for short one- or two-day classroom studies.

The first of the studies was intended to evaluate the relative advantages of (1) regular text, (2) revised text (which included frequent, short summaries), (3) programed text (with written responses), and (4) programed text requiring only the first letter of words as responses. In addition, multiple-choice questions with chemical feedback (achieved by treating the letter preceding the correct alternative with an invisible chemical which reacted to fluid in the student's felt-tip pen) were presented to all groups of students as an immediate review. All students worked on these review items, after completion of one trial through the assigned program, until the two-hour total learning period was ended.

Scores on a short-answer test showed no significant differences among the four conditions. It was found, however, that the programed-text students performed considerably higher when test answers were the same as responses in the program, and considerably lower when the test answers were *not* responses in the program. Also, it was found that the multiple-choice review items contributed highly to test performance. Other findings of general interest growing out of this first preliminary study are presented elsewhere (Briggs, *et al*, 1962).

The findings of this first study had two major implications for development of the programing teaching package:

1. If the written-response technique were to be used, it either should be (a) restricted to teaching key responses or key response-related material, or (b) modified to free the technique from its strong response orientation.

2. The apparent efficacy of the multiple-choice review technique should be explored to determine its most effective use and to confirm its value as a teaching procedure.

The examination of the multiple-choice review technique was the topic of the second preliminary study, which also used the U. N. as subject matter. The general format of the programing required the student to read pages of "text" and to answer multiple-choice questions with chemical feedback. Nine conditions were used to determine how much text should be read before answering the multiple-choice review questions over this material (size of step), and how many review questions should be used after each "step" of text. The results showed a surprising lack of positive effect from increasing the number of review items, and from increasing the number of text divisions (no statistically significant differences). On the contrary, the results did suggest that many small steps in text, each followed by many review items, should be avoided. This study implied that if the multiple-choice review technique were to be used, two review items after each page of text would be as effective as any other combination, and it would be a convenient format.

Consideration of these results also led to the last of three preliminary studies using the U. N. subject matter. If increasing the frequency and number of review items did not increase performance, perhaps increasing the contextual content in the "text" portion of the program and using sentence feedback for the multiple-choice items might prove more effective. This hypothesis was tested, in the third and final preliminary study, by comparing criterion test performance of a group using the chemical-feedback version of the U. N. program with a group using an enriched-text/statement-feedback version of the program.

"Enrichment" consisted of adding background material, anecdotes, and examples to the text portion of the program. Test differences between the groups were slight. The implication of this study was that adding contextual content to the text material in the programs was not a promising way to increase the learning of the basic subject matter. (A study just completed under sponsorship of the Office of Naval Research, Contract No. Nonr-3077(00) suggests that different results could have been obtained by identifying which statements in the text are "enrichment" statements and which are "basic" statements.) Although the statement-feedback did not produce any evidence of increased learning, it nevertheless proved to be a convenient format for the multiple-choice technique.

In summary, the three preliminary studies using the U. N. material had the following major implications for development of the programs to be used for the program-oriented teaching of government:

1. Conventional write-in programs should be used only to teach material for which the criterion is to answer test questions with responses that are the same as the responses used in the program, or the programing technique must be modifed to produce a better knowledge of the material not called for as responses in the program.

2. The programs consisting of "text" and multiple-choice items may conveniently have a ratio of about two multiple-choice items for each page of text.

3. Adding "enrichment" material to the text portion of the program (without giving the student a guide for discriminating the "enriched" material from the "basic material), or increasing the number or frequency of multiple-choice items, does not add to performance as measured.

Phase II: Development and Evaluation of Alternative Means for Integrating Programed Instruction with Normal Procedures

The following is an account of the second phase of work involving the development of the program-oriented instruction for the unit on "The Structure and Function of the Federal Government" (referred to as "Unit III" in this report). When reading this account, it will be helpful to keep in mind that the effort in this second phase of work involved working with government classes held during two successive semesters:

Fall 1961 :	Tryout of test items for Unit III; first comparison of method combinations, in conjunction with first classroom tryout of programs for the last portion of Unit III.
Spring 1962:	Classroom tryout of all programs, in conjunction with full-scale methods comparison.

Selection of the content material for the programs and tests was based on the outcome of several efforts. While the procedures used were not directly drawn from any one specific source, they were undoubtedly influenced by reference to some of the publications concerned with the classification of educational goals (Bloom, 1956; Gross and Zeleny, 1958; Johns, 1953; Patterson, 1960; Carpenter, 1953; Price, 1958; NCSS Committees on Concepts and Values, 1957; California State Curriculum Commission, 1962).

Initial background material on the course was obtained by (1) discussions with the teachers who conducted the classes, (2) examination of the course outline, (3) reading the course textbook (Bruntz, 1961) and other textbooks on U. S. Government (Posey and Huegli, 1959; Haefner, et al, 1960; Brown and Peltier, 1960), (4) examining previously used tests, and (5) observing class sessions.

After the general content to be covered by the course was determined by the activities described in the paragraph immediately above, there remained to be developed a more concrete plan for the preparation of criterion tests, programs, and lectures. Thus, an item-by-item information analysis was performed on the material contained in the class textbook, the material derived from class sessions, and the information drawn from discussions with the teachers. Each item of information was rated on a three-point scale of importance by one of the teachers. The ratings were reviewed to assure their consistency and to confirm that some plausible dimension had been used in scaling the items. This dimension can best be described as "specificity-generality." That is, items of information rated high on the scale were general in nature and had many implications for a number of related information items.

This information analysis of the course content material served as a guiding basis in preparing tests, programs, and lectures. With respect to test and program development, the function of the information analysis was of greater relative importance in selecting test items than in determining content coverage in the programs because of the need in programing to communicate on a broad base of exposition. Nevertheless, the information analysis was the only formal link relating the programs to the tests.

Criterion test development. The criterion chosen for comparing the relative effectiveness of various instructional methods combinations was students' scores on objective tests based on course content. It is both impractical and unnecessary to develop criterion test items which assess students' knowledge of and ability to apply everything they have supposedly learned about a subject as broad in scope as the structure and function of the U. S. Government. There are two main solutions to the problem of developing effective criterion measures. The first consists of selecting the desired criterion behavior and then focusing instruction and subsequent evaluation solely on this behavior. The importance of applying this "teach the test" approach is extolled by many "experts" but is not typically employed by classroom teachers who are involved in teaching any high-density subject matter area such as government, history, economics, literature, etc. The alternative approach involves attempting to develop criterion measures which adequately sample students' knowledge of the material in question. The basic assumption in this instance is that if a student demonstrates that he has "learned" a given percentage of a sample of course material, he also has "learned" this same percentage of the entire mass of course material.

The approach used in the Spring 1962 classroom pilot study was a combination of the two approaches mentioned above. Students were "taught the test" with regard to the more important aspects of Unit III and were tested over the relatively less important aspects by the "sampling" method.

Initially, a large pool of objective test items was constructed to provide a means of assessing students' knowledge and understanding of important factual and conceptual material presented in the five chapters of text which constituted one unit (Unit III) of the U. S. Government course of study. Each item in the pool of test items was classified as being essentially a specific fact, general fact, application, or vocabulary item. This classification was made so that items selected for a test would represent as good a balance as possible among these four "kinds" of items, within the constraints of the subject matter.

Classifying a test item in this manner involved determining what that test item was intended to measure. Since nearly all items required a student to combine his knowledge of specific and general facts, his understanding of subject-matter vocabulary, and his skill in applying all of this when answering the test item, one could argue that actually any test item could fall into all four categories. However, by determining what the item was intended to emphasize most heavily, that item could be assigned its appropriate classification.

Following is a more detailed account of the rationale used in assigning each test item to one of the four classifications: specific fact, general fact, application, or vocabulary.

IF THE ITEM WAS INTENDED TO TEST THE STUDENT'S:	THEN THE CLASSIFICATION ASSIGNED THE ITEM WAS:
. . . knowledge of subject-matter vocabulary definitions	VOCABULARY
. . . ability to apply his accumulated knowledge of pertinent subject-matter vocabulary, general facts, and specific facts to a "new" situation (one not duplicated in the text, program, or lecture)	APPLICATION
. . . knowledge of principles, concepts, philosophies, or ideas which are basic enough to underlie or serve as foundations for institutions, processes, systems, etc.	GENERAL FACT
. . . knowledge of factual material which, although it may be "basic" to his understanding of institutions, processes, systems, etc., may not be as broad in scope as "general fact" material	SPECIFIC FACT

In addition to the above classification, results of the information analysis of course content material (described previously) served as a guide to staff personnel in (1) developing additional test items to insure adequate content coverage and (2) selecting items for inclusion in the various criterion tests.

The types of item format to be classified were multiple-choice, true-false, and short-answer completion, since the students' previous U. S. Government tests included these types of items, and it was intended that the experimental tests should be as similar as possible to the regular course tests. Prospective items were next reviewed by an experienced teacher and by project staff members in order to eliminate or revise those which were ambiguous or misleading, and to insure that the items were written at a level appropriate for twelfth-grade students.

Test-item tryouts were first performed in conjunction with preliminary program tryouts. Individual students first completed programs and then attempted to answer relevant test items. The items then were discussed with each student. Next, items from the pool were tried out in the Unit III test administered to approximately 225 students in five classes during November, 1961. Another group of items was administered to the same students in the January 1962 semester examination. Following both review and tryout, items were deleted or modified, and new items were added to the original pool to cover important points more effectively.

Estimates of difficulty and internal consistency described by Thorndike (1949) were computed for those items which were included in the November 1961 Unit III test and in the January 1962 semester examination. The difficulty index served two primary purposes. The first purpose was to identify extreme items; i.e., those which are very easy or very difficult. The second purpose was to insure that criterion tests discriminated reliably between students who learned a high proportion of course material and those who learned a low proportion of course material, thereby providing criterion tests which would discriminate between instructional methods which produce learning. The consensus is that some degree of scatter around an average item difficulty in the middle-difficulty range (preferably around .50) will produce sufficiently reliable discrimination. The average item difficulty for the criterion tests used in the Spring 1962 classroom pilot study was .69, with a moderate amount of scatter in the difficulty distributions.

The method used to compute the difficulty index involved (1) determining the proportion of students who responded correctly to each item, and (2) correcting for chance success using the following formula:

$$P_c = \frac{R - \frac{W}{n - 1}}{R + W + 0}$$

P_c = the proportion of students actually knowing the answer to the item
R = the number of students giving the right answer
W = the number of students giving a wrong answer
0 = the number of students choosing to omit the item
n = the number of response alternatives for the item

Internal consistency data were also used in an editing capacity; i.e., to identify questionable items, particularly those having extremely low or negative correlation estimates and to insure adequate item discrimination. Steps followed to obtain internal consistency estimates were as follows:

1. The high and low 27 per cents of the total sample of students were selected on the basis of total score on all items.

2. The proportions of students in the high and low 27 per cent groups who responded correctly to each item were determined.

3. The above proportions were corrected for chance success (same as for difficulty index determination).

4. Estimates of correlation coefficients were obtained by entering a table prepared by Flanagan (1962).

An analysis-of-variance technique developed by Hoyt (1941) was used to compute estimates of reliability for the criterion tests. Reliability coefficients obtained for the five segment tests were the following:

Segment	Reliability Coefficient
1	.82
2	.77
3	.81
4	.75
5	.76

According to Guilford (1936), it is generally agreed that for evaluating individual scores the reliability of a test should be at least .90, but that for evaluating group scores the reliability may be as low as .50. The coefficients obtained for the various segment tests fall well within the "adequate" range for assessing group accomplishment.

Program development. Two sets of programs were prepared for the Unit III material in the U. S. Government course. The formats of the two sets of programs were determined in part by the results of the three preliminary studies using programed material on the United Nations.

One set of programs consisted of pages of text with two multiple-choice questions at the bottom of each page. The questions were chosen to test comprehension of the page of text with the intention to direct the student to a rereading of the text if he could not answer the questions. The answers to these questions were given in paragraph form at the top of the following page, above the text on that page (see Appendix K). This format was derived rather directly from the results of the preliminary studies described earlier.

A second set of programs over the same material was prepared in a "write-in" format. A major modification of the conventional write-in format used for the U. N. material was introduced in order to eliminate the response-bound nature of the U. N. program. The key to this modification was eliminating formal presentation of the write-in responses as feedback. The "feedback" was written into the material surrounding the write-in blank instead of being presented as an isolated answer for the blank. Students were thereby required to read the surrounding context of the blanks to determine and to confirm their responses for the blanks.

The rationale for this procedure is consistent with the general rationale underlying the findings reported by Goldbeck and Campbell (1962) that write-in response programing was more effective when response difficulty was high (as measured by response latency) than when it was low. The assumption, in both that study and the present one, is that programing can be made more effective if the program requires the student to stop and think (study) as he proceeds through the program. For the U. S. Government programs, this characteristic was intended to be effected by withholding simple feedback to write-in responses and embedding it instead in the reading portion of the program.

In addition, the usual feature of dividing write-in programed material into small steps or frames, one to a page, was eliminated. This characteristic made it possible for students to reread and study whole pages of program after the blanks had been filled in, the same way that textbook material can be reviewed. An example of this programing is shown in Appendix F.

The initial versions of both kinds of programing were tried out with a few students on an individual basis. These initial versions were revised on the basis of program errors, tests administered to students, and interviews with the tryout students. The two teachers in charge of the U. S. Government courses also contributed many helpful suggestions for revising the programs, based in part on their knowledge of those portions of the subject matter which present more difficult learning problems for the students.

Fall 1961 Classroom Pilot Study

The first tryout under classroom conditions of a U. S. Government write-in program was conducted during the Fall 1961 semester. The Federal Courts write-in program was revised in time to be used in two (of the five) U. S. Government classes without altering the normal curriculum sequence. All students were general-level students (college preparatory students having been scheduled to take the course during the Spring 1962 semester).

Although both U. S. Government classes spent two class days on the Federal Courts material, the method of combining programed instruction with lecture-discussion over this material was different for the two classes. Class A worked on the program on Day 1, had a lecture-discussion period on Day 2, and was tested on Day 3. Class B had a lecture-discussion period on Day 1, worked on the program on Day 2, and was tested on Day 3. Both these classes completed an average of about two-thirds of the program in class, completing the last third of the program as homework.

A third general-level class also spent two class days studying the Federal Courts, but did not use the program. Two other general-level classes spent four class days studying this topic without use of the program.

On the 18-question test over this material, Class A (with the program preceding the lecture-discussion period) answered an average of 62 per cent of the questions correctly, and Class B (with the program following the lecture-discussion period) answered 69 per cent correctly. While this difference favored the condition of following the lecture-discussion period with a program, the difference was not statistically reliable. Analysis of covariance (using the verbal scale of the Differential Aptitude Test as the predictor variable) showed no statistically reliable differences among the two classes using the programs and the two non-program classes which spent twice as much class time (four days) on the topic. The latter (non-program) classes scored 66 per cent and 68 per cent on the test. The non-program class which spent the same amount of class time as the program classes scored only 58 per cent on the test. This score is reliably lower than the scores for three of the other four classes, the exception being Class A.

These results with a preliminary version of the write-in program were encouraging with reference to the possibility of successfully integrating programing into a classroom teaching-package. In regard to the intent of the programing to cause students to study as they worked through the program, about one-third of the students reported that they reread part of the material before filling in at least half of the blanks. About half of the students reported they only occasionally reread material before filling in a blank.

The data were somewhat ambiguous on the question of whether programs should precede or follow lecture-discussion periods. It is relevant that the program error rate for the class with the program first was 12 per cent, while the error rate for the class with the lecture-discussion first was only 8 per cent. On the other hand, the class with the program first responded more adequately to the teacher's questions during the lecture-discussion period. Students in this class failed to answer only 18 per cent of classroom questions, while the class with lecture-discussion first failed to answer 58 per cent of the questions put to students by the teacher. It appeared that the lecture-discussion helped students in working on the program, and that the program facilitated classroom discussion. While most teachers would probably choose the latter advantage, the relative effectiveness of the two procedures for improving criterion test performance remained a question for more study.

Spring 1962 Classroom Pilot Study

The two college preparatory classes taking U. S. Government during the Spring 1962 semester provided data on the classroom use of all programs and on the relative effectiveness of several techniques for combining the programed instruction with standard classroom procedures.

For the purpose of this tryout, Unit III ("The Structure and Function of the Federal Government") was divided into five teaching segments:

1. Congress and Its Powers
2. How Congress Makes Laws
3. The President and His Powers
4. The National Administration
5. Our Federal Court System

Ten methods for combining programing with teacher-oriented instruction were tried out during a month of classroom instruction. Two different combinations were evaluated during each of the five segments, with the two classes receiving different combinations. The methods comparisons used may be summarized briefly as follows:

Segment 1	write-in programs with follow-up lecture-discussions based on students' critiques of the program	vs.	lecture-discussions over the regular textbook assignment, based in part on students' critiques of the previous day's lecture
Segment 2	write-in programs with follow-up lecture-discussions and a multiple-choice program for review	vs.	introductory lectures with write-in programs only

Segment 3	introductory lecture days followed by multiple-choice program days	vs.	multiple-choice program days and follow-up lecture-discussion days
Segment 4	write-in programs as homework followed by discussion sessions with the teacher answering questions, and a multiple-choice program as review homework	vs.	write-in program as homework followed by discussion sessions with students answering other students' questions, and a multiple-choice program as review homework
Segment 5	write-in and multiple-choice programs without lecture or discussion	vs.	the sequence of introductory lecture, write-in program, follow-up lecture-discussion, and multiple-choice program

A detailed daily lesson plan was prepared for use by the teacher. A summarized outline of the lesson plans for the five segments of instruction is presented below.

	CLASS ONE	CLASS TWO
	Segment 1: Congress and Its Powers	
	Text Assignment: Chapter 16 (optional)	Text Assignment: Chapter 16
DAY 1	WRITE-IN PROGRAM begun in class and completed at home, if necessary; LESSON CRITIQUE last few minutes of class period.	LECTURE over topics in first half of Day 1 program; LESSON CRITIQUE last few minutes of class period.
DAY 2	FOLLOW-UP LECTURE over topics in Day 1 program.	LECTURE over topics in second half of Day 1 program; LESSON CRITIQUE last few minutes of class period.
DAY 3	WRITE-IN PROGRAM in class and completed at home if necessary; LESSON CRITIQUE last few minutes of class period.	LECTURE over topicsin first half of Day 3 program; LESSON CRITIQUE last few minutes of class period.
DAY 4	FOLLOW-UP LECTURE over topics in Day 3 program.	LECTURE over topics in second half of Day 4 program; LESSON CRITIQUE last few minutes of class period.
DAY 5	EXAMINATION over materials presented Days 1 through 4; QUESTIONNAIRE over Segment 1; Segment 2 WRITE-IN PROGRAM to be completed at home.	EXAMINATION over materials presented Days 1 through 4; QUESTIONNAIRE over Segment 1.

(Lesson plans continued on next page.)

	CLASS ONE	CLASS TWO
	Segment 2: How Congress Makes Laws	
	Text Assignment: Chapter 17 (optional)	Text Assignment: Chapter 17 (optional)
DAY 1	First half of WRITE-IN PROGRAM completed at home before class; FOLLOW-UP LECTURE over topics in program completed at home; second half of WRITE-IN PROGRAM begun in class and completed at home if necessary.	INTRODUCTORY LECTURE over topics in first half of WRITE-IN PROGRAM; WRITE-IN PROGRAM begun in class and completed at home if necessary.
DAY 2	FOLLOW-UP LECTURE over topics in Day 1 program; MULTIPLE-CHOICE PROGRAM begun in class and completed at home if necessary.	INTRODUCTORY LECTURE over topics in second half of WRITE-IN PROGRAM; WRITE-IN PROGRAM begun in class and completed at home if necessary.
DAY 3	"POINTS TO LOOK FOR IN FILM" SHEETS; FILM, "The Legislative Process"; EXAMINATION over the materials presented Days 1 and 2.	FILM, "The Legislative Process"; EXAMINATION over materials presented Days 1 and 2.
	Segment 3: The President and His Powers	
	Text Assignment: Chapter 18 (optional)	Text Assignment: Chapter 18 (optional)
DAY 1	QUESTIONNAIRE over Segment 2; INTRODUCTORY LECTURE over topics in Day 2 program.	QUESTIONNAIRE over Segment 2; FILM, "The Congress"; MULTIPLE-CHOICE PROGRAM begun in class and completed at home if necessary.
DAY 2	FILM, "The Congress"; MULTIPLE-CHOICE PROGRAM begun in class and completed at home if necessary.	FOLLOW-UP LECTURE over topics in Day 1 program.
DAY 3	INTRODUCTORY LECTURE over topics in Day 4 program.	FILM, "The President"; MULTIPLE-CHOICE PROGRAM begun in class and completed at home if necessary.
DAY 4	"POINTS TO LOOK FOR IN FILM" SHEETS; FILM, "The President"; MULTIPLE-CHOICE PROGRAM begun in class and completed at home if necessary.	FOLLOW-UP LECTURE over topics in Day 3 program.
DAY 5	EXAMINATION over materials presented Days 1 through 4; QUESTIONNAIRES over Segment 3; FILM, "T-Men of the Treasury"; Segment 4 WRITE-IN PROGRAM to be completed at home.	EXAMINATION over materials presented Days 1 through 4; QUESTIONNAIRES over Segment 3; FILM, "T-Men of the Treasury"; Segment 4 WRITE-IN PROGRAM to be completed at home.

(Lesson plans concluded on next page.)

	CLASS ONE	CLASS TWO
	Segment 4: The National Administration	
	Text Assignment: Chapter 19 (optional)	Text Assignment: Chapter 19 (optional)
DAY 1	First half of WRITE-IN PROGRAM completed at home; DISCUSSION consisting of student questions and teacher answers over topics in program completed at home; WRITE-IN PROGRAM to be completed at home.	First half of WRITE-IN PROGRAM completed at home; DISCUSSION consisting of student questions and comments and student answers over topics in program completed at home; WRITE-IN PROGRAM to be completed at home.
DAY 2	DISCUSSION consisting of student questions and teacher answers over topics in Day 1 program completed at home; MULTIPLE-CHOICE PROGRAM to be completed at home.	DISCUSSION consisting of student questions (and comments) and student answers over topics in Day 1 program completed at home; MULTIPLE-CHOICE PROGRAM to be completed at home.
DAY 3	FOLLOW-UP LECTURE over topics in Day 1 and Day 2 programs; MULTIPLE-CHOICE PROGRAM to be completed at home.	DISCUSSION consisting of student questions (and comments) and student answers over topics in Day 1 and Day 2 programs; MULTIPLE-CHOICE PROGRAM to be completed at home.
DAY 4	EXAMINATION over material presented Days 1 through 3; QUESTIONNAIRE over Segment 4; FILM, "The Supreme Court."	EXAMINATION over material presented Days 1 through 3; QUESTIONNAIRE over Segment 4; FILM, "The Supreme Court."
	Segment 5: Our Federal Court System	
	Text Assignment: Chapter 21 (optional)	Text Assignment: Chapter 21 (optional)
DAY 1	WRITE-IN PROGRAM begun in class and completed at home if necessary.	INTRODUCTORY LECTURE over topics in Day 1 program; WRITE-IN PROGRAM begun in class and completed at home.
DAY 2	MULTIPLE-CHOICE PROGRAM begun in class and completed at home if necessary.	FOLLOW-UP LECTURE over topics in Day 1 program completed at home; MULTIPLE-CHOICE PROGRAM begun in class and completed at home.
DAY 3	UNIT III EXAMINATION (PART 1); EXAMINATION over materials presented Days 1 and 2; UNIT III EXAMINATION (PART 2).	UNIT III EXAMINATION (PART 1); EXAMINATION over materials presented Days 1 and 2; UNIT III EXAMINATION (PART 2).
DAY 4	UNIT III EXAMINATION (PART 3); QUESTIONNAIRE over Segment 5.	UNIT III EXAMINATION (PART 3); QUESTIONNAIRE over Segment 5.

Results of segment tests. U. S. History grade-point average and the verbal scale of the Differential Aptitude Test (DAT) were used as covariance predictor variables in evaluating the segment test results, because the two classes differed considerably on these two variables (to the advantage of

Class Two). Table 1 shows the adjusted test score means and estimated standard deviations for the two classes on the segment tests.

Table 1

Adjusted Segment Test Means

Segment	Class One (N=33)	Class Two (N=32)	Estimated Standard Deviation (N=65)	Maximum Possible Score
1	41.5	39.6	5.83	57
2	20.8	21.6	2.69	25
3	35.3	36.0	4.45	51
4	35.2	33.9	3.45	42
5	26.1	28.1	2.96	33

Effect of lectures. The only difference between means that was statistically reliable by the method of covariance was the difference for Segment 5 (F=6.59, P<.025 for df=1,61). Class Two, which had the introductory and follow-up lectures combined with the programs, performed on the test reliably higher than Class One, which had no lectures with the programs. The conclusion that combining lecture-discussions with programs can improve test performance appears to hold up against some of the arguments that might qualify or delimit this conclusion. It might be expected, for example, that Class Two spent more time studying the Segment 5 topic than Class One, since the class time taken away from working on the programs to participate in lecture-discussions would have to be made up finishing the programs at home. This was not the case, according to the questionnaire data from students. The difference in homework time on the programs was compensated for by the fact that Class One spent twice as much time studying the textbook as did Class Two.

Factors underlying the small obtained differences. While not statistically reliable, the Segment 1 difference in favor of Class One (which had programing) over Class Two (which did not) was of the same magnitude as the statistically reliable difference in Segment 5. In general, however, the magnitude of test-score differences for the method combinations was quite small. In retrospect, these obtained small differences between methods could be attributed to a combination of two elements of the conditions under which the methods were evaluated. First, tests were given at frequent intervals, which could be expected to maintain a high level of motivation. (There is a suspicion that write-in programs have most effect, as compared to other study methods, when motivation is low. See discussion, Goldbeck and Briggs, 1962.) Second, the material was covered at a slow enough pace so that motivated students could spend considerable time studying the material at home. Such a combination of conditions would not appear to be optimum for comparing teaching methods, since high amounts of independent (uncontrolled) study would tend to minimize the measurable effects of controlled learning conditions. The implication for the conduct of subsequent research was obvious.

An analysis of effects of the multiple-choice programs. The failure to find a test performance advantage for Class One on Segment 2 was somewhat surprising, since this class was given both write-in and multiple-choice programs while Class Two was given only the write-in program. The observed test mean difference actually favored the class receiving only the write-in program. Although the sequence of lecture and program differed in these two classes during Segment 2, the results of Segment 3 showed that the sequence of program and lecture produced no appreciable effects on test performance. The apparent implication was that the multiple-choice program did not add appreciably to teaching effectiveness. This implication received some confirmation from an examination of the percentage-correct scores for the five segments, corrected for chance by the following formula:

$$P'_c = \frac{\bar{Y}'' - \text{chance score}}{\text{maximum score} - \text{chance score}} \times 100$$

where $\bar{Y}''$ is the mean test score adjusted by the DAT verbal scale and the U. S. History grade-point average covariance predictor variables.

These percentage scores are shown in Table 2.

Table 2

Segment Percentage-Correct Scores

Segment	Class 1	Class 2
1	63	58
2	75	79
3	55	57
4	78	73
5	70	79

While there is no good basis for assuring that the segment tests were of equivalent difficulty, it nevertheless was the case that the lowest scores were obtained for Segment 3, the only segment where the multiple-choice program was the only program used.

The only indication that the multiple-choice programs were as effective as the write-in programs came from the students in their replies to a questionnaire. Class One showed a slight preference for the write-in program at the end of Segment 2 (by a 13:11 ratio). At the end of Segment 4, when both classes were asked for a preference, Class One showed a shift in preference to the multiple-choice programs with nearly twice as many students preferring the multiple-choice program. Students in Class Two were divided nearly equally in their preference. Although the questionnaire asked students to indicate both the program "most easy to use" and the program from which they "learned the most," and although these two forms of the question showed nearly equal indications of preference, it is likely that students' opinions of which program taught best were influenced by the consideration of amount-of-work-required in completing the program. The fewer number of responses required by the multiple-choice program, along with the ease of finding these responses in the feedback paragraph, certainly made the multiple-choice program easier to fill out than the write-in program. More evidence on the relative superiority of the write-in programs used will be found in the analysis to follow.

Relative superiority of the write-in programs. In order to assess the relative contribution of multiple-choice programs, write-in programs, and lectures to criterion performance, a detailed analysis was performed on the content coverage of these media in relation to criterion test items. (In the case of the lectures, this analysis was based on transcribed tape recordings of all classroom sessions.)

Four categories were established to describe how the subject-matter material covered by criterion tests was presented to the students: directly-stated (DS); with-all-essential-information (W); without-all-essential-information (WO); not-mentioned (NM). Under the first category (DS), material needed to answer criterion test items was presented by programs or lectures in a direct-statement fashion; that is, in the programs or lectures, students heard or read material which subsequently appeared on a test in nearly identical form. Under the second category (W), knowledge required for successful criterion performance was simply discussed fully so that, although a criterion test question and answer was not presented "word for word" by the programs or lectures, all essential information students would need to know in order to correctly answer a test item was thoroughly covered in the course of topic discussion. Under the third category (WO), program or lecture discussion of topics covered by test items failed to present all essential information students would need to know in order to correctly answer the test item. Finally, under the fourth category (NM), material pertinent to test items had been omitted entirely from the programs or lectures.

The first two categories, directly-stated (DS) and with-all-essential-elements (W), were designated as "adequate" handling of this material; the third and fourth categories, without-all-essential-information (WO) and not-mentioned (NM), were designated as "inadequate" handling of criterion test material. Analyses of these DS, W, WO, and NM categories were utilized in determining the existence and nature of interactions among the three major instructional media when used in different combinations.

Assigning one of the four categories (DS, W, WO, or NM) to lecture and program treatments of subject-matter was accomplished in the following way. For each item on a criterion test, the lecture transcripts were examined until a discussion of the material covered by that test item was located. Based upon how adequately the information needed to correctly answer the test item was presented in the context of the lecture-discussion, an assignment of either the DS, W, or WO categories was made to lecture treatment of material covered by the test item concerned. If the topic was found to have been omitted entirely from lecture-discussions, an assignment of the NM category was made to lecture treatment of material covered by that test item. A similar search was made of multiple-choice and write-in programs to locate the discussion of material covered by the same test item, and again, one of the four categories was assigned to multiple-choice and write-in program treatment of the material covered by that test item. The above procedure was repeated until every item on all the criterion tests had been "keyed" to the lectures, the multiple-choice programs, and the write-in programs in terms of the DS, W, WO, or NM categories.

Next, the percentage of students who knew the correct answer (as opposed to selecting the right answer by chance) to the individual test item was determined to evaluate the effect of lectures and programs on criterion performance. In order to estimate the percentage of students who scored correctly on a test item through correct knowledge or correct reasoning (P_c), rather than through guessing, the raw percentage of students succeeding on each test item was corrected for chance. (See formula for computing P_c on page 6.) Although the corrected value for the percentage of students knowing the answer to a particular item is only an approximation, this corrected percentage can be expected to yield a better identification of what students actually have learned than the raw percentage of students succeeding on that item.

The discussion of the findings from these data will be concerned with comparing the three major instructional media (multiple-choice program, write-in program, and lecture) and the four discussion conditions (DS, W, WO, and NM) in terms of their relative "effectiveness," where the term "effectiveness" refers primarily to the magnitude of effect any condition exerts on criterion test performance.

A comparison of test performance in terms of weighted mean P_c's showed that test performance increased 13 per cent for test items adequately covered (DS or W) in the programs (over items not adequately covered in the programs), but increased only 6 per cent for items adequately covered in the lectures (over items not adequately covered in the lectures). Within this descriptive framework, the programs had more effect on test performance than did the lectures. It is relevant to report that both types of programs (multiple-choice and write-in) presented over four-fifths of the material covered on tests adequately (multiple-choice programs = 54 per cent DS, 33 per cent W; write-in program = 43 per cent DS, 39 per cent W). On the other hand, lectures in both classes presented one-third of the material adequately and omitted over half of the material covered by the criterion tests (Class One lectures = 55 per cent NM; Class Two lectures = 54 per cent NM).

The degree of adequacy (DS, W, NM) of program coverage of test items had more effect on test performance for items which had been well covered in lectures (DS and W) than for items not mentioned in the lectures. That is, for items categorized as DS in the lectures, adequacy of program coverage was associated with an increment in P_c value of 35 per cent (from 50 per cent for NM program coverage to 85 per cent for DS program coverage). For items categorized as W in the lectures, adequacy of program coverage was associated with an increment in P_c value of 17 per cent (from 60 per cent for NM program coverage to 77 per cent for DS program coverage). The corresponding increment for test material omitted entirely (NM) from lectures was 9 per cent (from 65 per cent for NM program coverage to 74 per cent for DS program coverage).

A high degree of lecture coverage of test items had a facilitating effect on test performance for items which had been directly stated in programs (DS), but had a negative effect for items not mentioned in the programs. For example, for items categorized as DS in the programs, adequacy of lecture coverage was associated with an increment in P_c value of 11 per cent (from 77 per cent for NM lecture coverage to 88 per cent for DS lecture coverage). For W program items, adequacy of lecture coverage was associated with an increment of only 2 per cent (from 69 per cent for NM lecture coverage to 71 per cent for DS lecture coverage).

For test items not mentioned in the programs (NM), adequacy of lecture coverage was associated with a *decrement* in P_c value of 18 per cent (from 68 per cent for NM lecture coverage to 50 per cent for DS lecture coverage).

There are several apparent generalizations that may be drawn from the above findings. First, programing and teacher presentations were mutually facilitating under the conditions of instruction used. This outcome should suggest a bit of humility for both programers and lecturers who advocate exclusive use of their specialty. Further, it indicates that the combination of these instructional media may require a careful balance of content coverage as well as the usual consideration of careful preparation. While it might be argued that special emphasis on careful preparation of a single media for independent use may obviate the necessity to consider the integration of two or more instructional media, the latter alternative provides a promising avenue for the development of improved teaching procedures. This alternative of combined media has not always been fully recognized, and the advent of programing as a useful and convenient instructional medium makes this alternative especially attractive. The exceptionally strong dependency found for the lecture-discussion medium on programing coverage raises a challenge for the teacher, along with the promise for improved teaching procedures. It is indicated that the teacher must consider choosing wisely the topics which go beyond the scope of the program and must exercise skill in the way that they are introduced. A similar challenge is put to the programer who must prepare programs which provide students with the kind of learning that enables the teacher to present the kind of material he believes is most appropriate and instructive.

Another finding from these data showed that the write-in program had more overall effect on test performance than did the multiple-choice program. That is, when test-performance curves for both classes were combined, it was found that test performance increase 13 per cent in P_c value for test items adequately covered by the *write-in program* (DS and W), over items not adequately covered by the write-in program (NM). On the other hand, test performance showed almost no increase in P_c value (1 per cent) for test items adequately covered by the *multiple-choice program*, over items not adequately covered by the multiple-choice program. This is in line with the previously discussed finding that the multiple-choice program was not as effective a teaching medium as the write-in program.

Several qualifying factors may be considered here. First, when write-in and multiple-choice programs were used in combination within a segment, the write-in program was always administered first. Under these circumstances, the write-in program may have served to accomplish original learning, and the multiple-choice program may have essentially served to highlight and review main points. (Or, this may be a case illustrating Jost's law pertaining to associations of equal strength but unequal age. At any rate, an independent study (Campbell, 1962) of branching programs suggests that if an item of information is not grasped at first presentation, it takes considerable repetition or new exposure to establish it firmly.)

A related consideration is that students may have built-in criteria as to what *they* think they should learn, and how well they should learn it. To a certain extent, these criteria have been "built in" by students' previous classroom experience. For instance, if students felt the write-in program contained "all they should know," they may have completed the multiple-choice program more perfunctorily.

Second, the write-in program required students to make more responses than did the multiple-choice program, and the greater number of write-in responses may have required a greater amount of rereading of the write-in program. In contrast, the multiple-choice program had feedback printed on the following page, which made it relatively easy for students to find correct answers without rereading previous material. Student-completed questionnaires confirm that the write-in programs took much more time to complete than the multiple-choice programs due to the necessity to (1) reread previous material to find answers, instead of turning to a following page for feedback, and (2) write out the answer instead of check-marking an alternative. If it is true that the extra time spent rereading material and writing out answers helps students to learn better than the multiple-choice procedure, it is reasonable to expect the write-in programs to affect test performance to a greater degree than the multiple-choice programs.

These findings, coupled with the earlier findings which indicated a relative weakness of the multiple-choice programs compared to the write-in programs, led to the conclusion that for the purposes of the Fall 1962 field test, inclusion of the multiple-choice programs would not be warranted.

Phase III: Fall 1962 Field Test of the Composite Instructional Methods

The major purpose of the field test held in the Fall 1962 semester was to introduce programing under classroom conditions in the optimum combination with teacher-oriented instruction, as determined by the preliminary and classroom-pilot studies conducted under this project.

The evaluation of this field test could have been based solely on the administrative success of presenting an integrated combination of programing and teacher-oriented instruction. For although both instructional media had been shown to be effective teaching procedures and to be mutually facilitating, there remained potentially difficult problems in scheduling the presentation of these media efficiently in an effective combination.

A possible approach to scheduling integrated programed instruction would be one which took advantage of the programing feature to allow students to progress at their own rates. To combine teacher instruction with programing used in this manner, however, would seem to require solution to the problems of flexible scheduling. That is, groups of students who progress through the programs at the same rate could be gathered together for teacher-conducted sessions at appropriate points in the curriculum. But until classroom facilities are augmented or redesigned to accommodate this type of procedure, it would not seem feasible to plan any large-scale introduction of programing within this conceptual framework.

The more practical goal at the present time would seem to be a procedure for introducing programing compatible with the current classroom conditions and school scheduling constraints. On the Fall 1962 field test, therefore, students were all assigned the same portion of programing each day and all participated in lecture-discussions in normal class groups.

Since the presentation of program material and lecture-discussion material was synchronized with respect to rate of topic coverage, considerable emphasis was given to requiring students to complete each day's program assignment. The introductory remarks (see Appendix A) read to the students on the first day of the field test reflect this emphasis. Also, a Program Assignment Schedule (see Appendix C for copies of the schedules given to students and to teachers, or "Non-Ss") was given to each student with the understanding that in the event of any absence, the programs assigned would be due on the day of return to class. (Programs were delivered to absentees by their classmates on a volunteer basis.) In order that the teacher could accurately monitor the completion of programs, an Attendance and Assignment Control Sheet (see Appendix E) was used to record the date on which each student received and completed each of the programs. This device was especially useful in keeping account of absent students and in demonstrating to all students that failure to complete a program on time would be noted and recorded. The feature of programs which requires written responses provides overt indication when an assignment has been completed. This feature, coupled with the use of the Assignment and Control Sheet to emphasize the importance of completing assignments, has advantages over the textbook for the efforts of both student and teacher in monitoring progress.

A daily lesson plan (see Appendix D) was prepared for the four weeks of instruction covered by the field test. This lesson plan was used by the teachers as a guide for integrating their lecture-discussion with the programing.

The five teaching segments used in the Spring 1962 classroom pilot study were collapsed to form three segments, with a test (see Appendix H) after each segment, as follows:

Segment 1: Congress

Segment 2: The President and the National Administration

Segment 3: Our Federal Court System

This schedule reduced to a minimum the number of teaching and study days and at the same time increased the ratio of teaching days to testing days, in order that the effectiveness of instruction could be evaluated with minimum opportunity for independent (uncontrolled) study time to confound the effects of the instructional method.

Since the Spring 1962 classroom pilot study indicated that both introductory and follow-up lecture-discussions were effective adjuncts to the programs, both sequences of lecture-discussions were integrated with the programs. Also, as in the previous pilot study, students were given some time to work on the programs in class, and were required to spend homework time in completing the programs. Since students differ in their rates of completing the programs, it was arranged that the first part of the class session be devoted to lecture-discussion, with the latter part of the class session allotted to starting work on the program. Students could thereby compensate for different work rates in class by spending different amounts of time working on the programs at home. All students would then come to class the following day having covered the same program material.

Additional advantages of this form of scheduling were that (1) the teacher had classroom time to complete record-keeping work and to begin preparation for subsequent class work, and (2) the students made a start on their homework assignment. (During the Spring 1962 classroom pilot study, students reported that having time to make however small a start in class on the homework assignment enhanced motivation to complete the assignment--an effect similar to the Zeigarnik phenomenon reported by experimental psychologists). Part of the teachers' classroom preparation time was devoted to reviewing the lesson critiques (see Appendix G) completed by the students after each program. This lesson critique was used by the teacher to guide his presentation for the review session preceding each test day.

The write-in programs used in the Fall 1962 field test (see Appendix F for a sample portion of the program) had undergone final revision based on the data collected during the Spring 1962 classroom pilot study. The multiple-choice programs were not used in the final field test because data from the Spring 1962 tryout indicated that their use would not contribute appreciably to teaching effectiveness.

In addition to demonstrating how programed instruction could be integrated efficiently with conventional classroom teaching, the Fall 1962 field test also was intended to compare the success of such an integrated instructional system with a conventional system of instruction, as measured by performance criterion tests.

Since there is a prevalent trend toward grouping students in classes according to some ability and/or achievement classification, and since the U. S. Government course used in the present study followed this practice, the efficacy of integrated programed instruction was evaluated with two levels of students (college preparatory and general levels). In order to obtain the most information about programing, teacher, and student variables (using the two available teachers, each of whom taught three classes), conditions were assigned to classes as shown by the "x's" in the following table:

	Teacher A		Teacher B	
	College Preparatory	General	College Preparatory	General
Programing	x	x	x	x
Non-Programing	x			x

This arrangement made it possible to compare (1) programing vs. non-programing for both college preparatory and general classes, and (2) teacher differences in introducing programing for both college preparatory and general classes.

Before discussing the results of the field test, it is relevant to describe a change made in the lesson plan immediately prior to the presentation of Segment 3, "Our Federal Court System." This change consisted of asking the teachers to assign the textbook chapter (which essentially paralleled program coverage of topics in this segment) as required reading for the four programing classes, in addition to completion of the program on the Federal courts system. This innovation was introduced because continuing in Segment 3 the integrated programing conditions used in the first two segments was not expected to show any new trends or results.

This expectation was founded on two outcomes of an analysis of the results of Segments 1 and 2. This analysis was completed just in time to initiate the change in procedure referred to immediately above, relating to assignment of textbook reading for Segment 3. This initial analysis revealed that (1) the field-test results from these first two segments were clear cut concerning the superior performance of programing classes compared to non-programing classes, as measured by the end-of-segment tests, and (2) the results from these two segments were consistent, in that the magnitude of differences between programing and non-programing classes were essentially the same--also, no teacher differences in introducing programing to general and college preparatory classes were found for either of the two segments (see Table 3). Therefore, Segment 3 presented an appropriate opportunity to integrate programed instruction with still another conventional teaching medium (reading of the textbook).

Results

Table 3 shows the field-test N's, means, and standard deviations of the three segment tests and the DAT verbal scale means for the six classes participating in the study. Also shown are the values for Segments 1 and 2 combined, since the instructional method conditions were equivalent for these segments and the independent-variable effects on test-score results for them were strikingly similar.

Table 3

Field Test N's, Means, and Standard Deviations

				Segment Tests											
		DAT(v)			I			II			I and II Combined			III	
Classes	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
GENERAL LEVEL															
Program Teacher A	22	42.9	24.42	22	48.6	7.68	22	53.7	9.29	22	102.3	15.79	22	29.6	3.81
Program Teacher B	22	53.2	26.17	22	48.3	7.56	22	55.0	10.17	22	103.3	16.41	22	30.5	3.88
Non-Program Teacher B	28	46.0	23.02	28	39.0	9.77	28	44.5	11.93	28	83.5	20.55	28	27.1	6.33
COLLEGE PREP. LEVEL															
Program Teacher A	28	77.9	19.49	28	56.5	6.67	28	62.9	7.36	28	119.4	13.03	28	31.8	4.38
Program Teacher B	25	78.0	20.03	25	56.6	6.89	25	62.6	9.19	25	119.2	15.33	25	35.3	4.72
Non-Program Teacher A	25	76.8	23.02	25	49.7	7.91	25	55.0	9.83	25	104.7	16.71	25	33.9	4.85

It should be noted that although there was no disparity in DAT verbal scores among the general-level classes (F=1.61, P >.05 for df=2,79), there was an inordinate number of extreme scores at the low end of the non-programing class distribution. Therefore, it was decided before collecting classroom data to omit from the test-score evaluations all students with a DAT verbal percentile score of less than ten. Eight students were omitted from Teacher B's general-level, non-programing class, and two students were omitted from Teacher B's general-level, programing class. This selective sampling resulted in more comparable DAT means for the general classes (F=1.03).

Absence of teacher differences for Segments 1 and 2. Examining first the field-test data from Segments 1 and 2, it is apparent that the tests showed no differences between the two teachers in presenting the integrated programed instruction. Test means reflecting the teacher effect differed only slightly, and these differences were not statistically reliable.

Superiority of integrated programing classes (Segments 1 and 2). All the integrated programing classes performed better on the Segment 1 and 2 tests than did the non-programing classes. Differences favoring the integrated programing on the combined Segment 1 and Segment 2 tests were statistically reliable for the students of both the college preparatory classes (F=16.30, P < .01 for df=1,76) and the general-level classes (F=19.94, P < .01 for df=1,70). The clear-cut and unequivocal superiority of integrated programing in raising test performance demonstrated that this teaching approach is far enough through the pains of its adolescent period to be considered seriously for the full-time job of education. This finding is especially striking because only a small portion of class time was devoted to programed learning. As a further matter of interest, students averaged from three to four minutes of working time for each page of programing. (A page in these programs, it should be remembered, presents much more material than does a "frame" in most programs.)

Effectiveness of integrated programing by ability level (Segments 1 and 2). As for the question of whether the integrated programing was more effective in improving performance at the college preparatory level or the general level, data in Table 3 would seem to indicate that the general-level classes were more amenable to the programing approach. It is difficult to be definite on this point from the present data, however, due to the fact that in the general-level classes, the U. S. history grade-point average was substantially lower for the non-programing class than for the programing classes. When two samples of students, matched on the basis of U. S. history grade-point average, were drawn from the programing and non-programing classes taught by the same teacher (N=14), the mean scores on the combined Segment 1 and Segment 2 tests were 103.2 and 89.8, respectively. This difference was comparable to programing/non-programing differences found for college preparatory classes. The possibility remains, of course, that programs could be prepared to be more suitable for either high- or low-ability students. For classes of exceptionally high- or low-ability students, this possibility should be given serious consideration. The important implication of the results from the present study, however, appears to be that the same programing, used under the same conditions, may be effective for both high- and low-ability groups.

(Aside from the present study, independent evidence supports the above supposition that for maximum effectiveness programs may need to vary according to certain characteristics of the group for which they are intended. An analysis just completed by Wayne Hershberger, under a contract sponsored by the Office of Naval Research, Contract No. Nonr-3077(00), supports the hypothesis that linear "small-step" programing helps students in inverse proportion to their reading ability, while a certain form of large-step, or "reading," programing helps students in proportion to their reading ability. It should be noted, however, that the linear programs utilized in the present study are not taken as typical of either "large-step" or "small-step" programs in general. Nevertheless, continued research on these matters may reveal ways to optimally adjust programs to individual and class differences.)

Shorter test-completion times for programing classes (Segment 2). During the Segment 1 test, it was noticed that the programing classes seemed to complete the test more quickly than the non-programing classes. Therefore, test-completion times were recorded for all students on the Segment 2 test. Mean time to complete the test for both general-level and college preparatory programing students was 27 minutes. Mean test completion times for the general-level and college preparatory non-programing students were 31 and 33 minutes, respectively. The shorter test times of the programing students were apparently indicative of the increased facility in dealing with the course material that was afforded by the programing.

Extra-curricular use of programs by students in non-programing classes (Segment 3). The data from Segment 3, although based on a relatively short period of instruction, provide additional information on several points. These include (a) extra-curricular use of programs and (b) effects of textbook assignment, as made by the two teachers.

Many of the students in the non-programing classes had discovered that programing was an effective way of improving test performance and had begun to use the programs of their friends in the programing classes. This practice was documented in part by the questionnaires completed by these students (see Appendices I and J for the questionnaires and summaries of student responses), and by discussions with the students which revealed that the extra-curricular use of programs during Segment 3 was more prevalent than the questionnaires indicated. While this form of student acceptance of the programs was indicative of their utility, it nevertheless detracted from the capability to measure this utility by the test results from Segment 3.

While some of the students in non-programing classes were beginning to seek out the programs during Segment 3 as a means for improving their grades, one of the teachers decided that two of his hard-working low-ability students in the non-programing general-level class might be able to pass a test by using the programing, whereas they had been unsuccessful before. The DAT verbal scores for these two students were in the vicinity of the tenth percentile. Although for other students the program error rates were generally low (averaging 2.0 per cent for a college preparatory class and 6.3 per cent for a general class), one of these two students was exceptionally unable to respond adequately on the program. This student's Segment 3 test score was at a failing level. The other student was able to respond on the program well within the program-error-rate range for general-level students. The Segment 3 test score for this student was a high "C"--the first time she had achieved a passing test score in the course.

The experience, just described, with the two students suggests two relevant obeservations. First, programs prepared for normal group use cannot be expected to replace all diagnostic and remedial work for special problem cases. Second, were another field test to follow this one, all students could benefit from the experimental programing, since the superiority of the integrated program groups now has been determined. Such a follow-on study, then, could concentrate on some other feature, such as devising and testing separate programs for general and college preparatory groups.

Effect of textbook reading and teacher differences (Segment 3). Results from Segment 3 shed some light on the role of textbook assignments as a teaching-method component. As indicated earlier, this was the only segment in the field test in which programing classes were assigned the pertinent textbook chapter as required reading, in addition to completing a program. It is relevant to note that one of the two teachers was more vigorous in making the textbook-reading assignment. This teacher variation is reflected in Table 4 by differences between Teacher A's classes and Teacher B's classes in the percentage of students who reported having read the assigned textbook chapter.

Table 4

Percentage of Students Reading Textbook Chapter for Segment 3

	Teacher A	Teacher B
General Programing Class	27%	42%
College Preparatory Programing Classes	17%	76%

These differences between Teacher A's classes and Teacher B's classes in reports of reading the textbook assignment were in turn reflected by differences between these classes in Segment 3 test-performance scores (see Table 3). The most divergent percentages of students reading the textbook were for the two college preparatory classes taught by the two different teachers; it is for these classes that we encounter the only occasion of a statistically reliable test-score difference associated with teacher difference ($F=7.98$, $P < .01$ for $df=1,51$), with Teacher B's classes performing higher than Teacher A's classes.

The apparent implications of this finding are (1) textbook reading assignments can contribute favorably to the program-lecture combination and (2) the effectiveness of the textbook assignment may be dependent on the manner in which the teacher makes the assignment. Most readers will immediately think of many other variables that are likely to determine the effectiveness of a reading assignment. It is just this variability, or unknown resultants, of a reading assignment which points up one of the major advantages of programing. The overt indications of student responses throughout the program both allow the teacher to exercise control more easily over student performance of the assignments and provide feedback to the teacher on completion of the assignments, thereby assuring that independent study by students is kept current with group work in the classroom (eg., lectures and discussions). Even with programs, of course, teachers still need to be concerned that students complete their homework assignments. However, the differences associated with textbook assignments and the lack of differences associated with programing assignments found in the present study are consistent with the expectation that programing should alleviate some of the problems involved in influencing students to study.

For the general-level programing classes, there were less disparate percentages of students who read the Segment 3 textbook chapter assignment (see Table 4). This more comparable amount of textbook reading was associated with equivalent test scores for these two programing classes (see Table 3); therefore, these two general-level programing classes could be combined for comparison with the general-level non-programing class. This comparison showed a statistically reliable difference in favor of the programing classes ($F=5.94$, $P< .05$ for $df=1,70$). It would be interesting to determine if a larger difference in textbook reading for general-level programing classes would result in a greater magnitude of test score differences, as was found for the college preparatory classes.

In summary, it should be noted carefully that no teacher differences were found regarding ability to utilize the integrated programed instruction; the only difference, as reported above, resulted from varying degrees of emphasis upon assignment of the textbook reading.

Summary of Final Field Test Results and Their Implications

In summary, the criterion tests showed that the programing, as combined with standard teaching procedures in the present study, substantially increased the amount of learning compared to the standard teaching procedures alone. This facilitation applied to both general-level and college preparatory students, and it did not differ for the two teachers who conducted the classes during the study.

There is some additional information from the field test that should be helpful in developing further applications of programed learning in the classroom. The reader may find interesting and valuable data from the questionnaires in Appendices I and J. One conclusion from these data is of special and general interest: A preponderance of students were enthusiastic about using the programs; most significant was the indication that students came to like the programing more as they had more experience with it. There is always the possibility (even with a month-long study) that it is the novelty of the new teaching method which produces, or at least influences, the favorable results. It might be mentioned parenthetically that any method that will improve student learning for as long as even one month is not without value. Nevertheless, it is in long-term effectiveness that we must be most interested. The report from students that their favorable attitude toward programing increased during the month, coupled with the lack of any indication that the effectiveness for increasing criterion test performance tended to drop off, was taken as confirmation of the belief that the phenomenon is not a transient one. It is likely that the success on tests experienced by the programing students was itself a partial sustainer of continued effectiveness of the teaching method.

The procedure used in the field test for introducing programing as a complementary part of an integrated system of instruction may serve as a model for larger-scale applications of this approach for improving education. It is doubtful that any hard-and-fast rules for teaching with programing would be appropriate. This point is commensurate with a general recommendation that the teacher be able to use programing in the specific ways which best fit his evaluation of the peculiarities associated with the teaching problems he perceives, and his own capabilities. (An example in point is the suggestion by one of the teachers in the present study that he would work through the programs as a class exercise in the case of teaching a remedial-level class.) Certainly, a new teaching media should be offered for use with guidelines as to how it can be used to best advantage. Without such guidelines, the medium may be perverted to misuse or relegated to perfunction. Hopefully, the expanded use of integrated programing will proceed with continued interaction among teachers, administrators, and researchers.

References

Bloom, Benjamin S. (Ed.), Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain. New York: Longmans, Green, and Company, 1956.

Briggs, L. J. The probable role of teaching machines in classroom practice. Theory Into Practice, Vol. I, No. 1, February, 1962, 47-56.

Briggs, L. J., Goldbeck, R. A., Campbell, V. N., and Nichols, D. G. Experimental results concerning form of response, size of steps, and individual differences in automated programs. In J. E. Coulson (Ed.), Programmed Learning and computer-based instruction. New York: John Wiley and Sons, 1962, 86-98.

Brown, Stuart and Peltier, Charles. Government in our republic. New York: Macmillan Company, 1960.

Bruntz, George G. Understanding our government. New York: Ginn and Co., 1961.

California State Curriculum Commission. Social studies framework for the public schools of California. Sacramento, California: California State Department of Education, June, 1962.

Campbell, V. N. Studies of bypassing as a way of adapting self-instruction to individual differences. San Mateo, California: American Institute for Research, May, 1962. (AIR-C41-5/62-FR, Grant No. Title VII: 736103, Final Report)

Carpenter, Helen (Ed.), Skills in social studies. Washington, D. C.: National Council for the Social Studies, of the National Education Association, 1953.

Coulson, J. E. (Ed.), Programmed learning and computer-based instruction. New York: John Wiley and Sons, 1962.

Flanagan, John C. Calculating correlation coefficients. Pittsburgh, Pennsylvania: American Institute for Research, 1962.

Goldbeck, R. A. and Briggs, L. J. An analysis of response mode and feedback factors in automated instruction. In W. I. Smith and J. W. Moore (Eds.), Programmed learning. Princeton, New Jersey: D. Van Nostrand Company, Inc., 1962, 166-191.

Goldbeck, R. A. and Campbell, V. N. The effects of response mode and response difficulty on programed learning. Journal of Educational Psychology, 53, 110-118, 1962.

Gross, Richard E. and Zeleny, Leslie D. Educating citizens for democracy: Curriculum and instruction in secondary social studies. New York: Oxford University Press, 1958.

Guilford, J. P. Psychometric methods. New York: McGraw-Hill Book Company, Inc., 1936.

Haefner, John, *et al*. *Our living government*. Chicago, Illinois: Scott, Foresman, 1960.

Hoyt, C. Test reliability obtained by analysis of variance. *Psychometrika*, *6*, 153-160, 1951.

Johns, Eunice (Ed.), *Social studies in the senior high school: Program for grades ten, eleven, and twelve*. *Curriculum Series, Number 7*. Washington, D. C.: National Council for the Social Studies, of the National Education Association, November, 1953.

National Council for the Social Studies, Committees on Concepts and Values. *A guide to content in the social studies*. Washington, D. C.: National Council for the Social Studies, of the National Education Association, 1957.

Patterson, Franklin (Ed.), *Citizenship and a free society: Education for the future*. Washington, D. C.: National Council for the Social Studies, of the National Education Association, 1960.

Posey, Rollin and Haugli, Albert. *Government for Americans*. Evanston Illinois: Row, Peterson and Company, 1959.

Price, Roy A. (Ed.), *New viewpoints in the social sciences*. Wash., D. C.: National Council for the Social Studies of the National Education Association, 1958.

Ramo, Simon. A new technique of education. In A. A. Lumsdaine and R. Glaser (Eds.), *Teaching machines and programmed learning: A source book*. Washington, D. C.: National Education Association, 1960.

Thorndike, R. L. *Personnel selection: Test and measurement techniques*. New York: John Wiley and Sons, Inc., 1949.

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APPENDICES TO FINAL REPORT

INTEGRATING PROGRAMED INSTRUCTION WITH CONVENTIONAL CLASSROOM TEACHING

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APPENDIX A

INTRODUCTION TO PROGRAMED UNIT OF INSTRUCTION

(The following is the content of introductory comments made by the teachers to their PROGRAM classes prior to beginning instruction on THE FEDERAL GOVERNMENT.)

INTRODUCTION TO PROGRAMED UNIT OF INSTRUCTION

During the next few days, instruction on THE FEDERAL GOVERNMENT will be based on "programed text" instead of the regular textbook. These "programs," as they are called, will be similar to the programs on the Constitution which you filled out a few weeks ago. You will usually have some time to work on the programs in class on the day they are handed out. They must be completed (all of the blanks filled in, while you read) and returned on the next day of class, at which time the topics covered in the programs will be discussed in class. Failure to hand in any program on time will result in an "F" grade (equivalent to an examination) for the assignment. Additional "F" grades will be given each day, until the late program is handed in.

You will be given a program assignment schedule that shows when each of the programs is assigned and when it is due. You are responsible for arranging to have someone in class bring you the assigned program on any day that you are absent from class. Programs that have been assigned during any absence are always due on the day of your return to class from the absence.

When you work on a program in class, always draw a line across the page at the point where you reached before leaving the classroom. This will enable us to find out the average amount of time that is needed to complete the programs. We don't want to find out how fast you can complete the programs (and you won't be graded on speed), but how much time we can expect other groups to spend on them. Therefore, we won't be looking at how much you finish in class individually, but at the average for the whole group.

While the programs are being used, you will not be required to bring the textbook to class. The textbook may be used as an outside reading source, just as the reading of newspapers and magazines is encouraged.

Hand out Program Assignment Schedules.

APPENDIX B

EXPLANATORY COMMENTS FOR NON-PROGRAM CLASSES ("Period 4")

(The following is the content of introductory comments made by the teachers to their NON-PROGRAM classes prior to beginning instruction on THE FEDERAL GOVERNMENT.)

EXPLANATORY COMMENTS FOR PERIOD 4 CLASSES

During the next few weeks, instruction in some of the other classes will be based on "programed text" instead of the regular textbook. The programed text is a different way of presenting the same information found in your text. It is similar to a workbook in that the student fills in blanks as he reads.

The class will continue to use the text as usual. You will be given an assignment schedule that shows when each chapter is assigned for reading this month, and when you must complete each reading assignment.

Hand out Assignment Schedules.

APPENDIX C

PROGRAM ASSIGNMENT SCHEDULE

(The following is the PROGRAM ASSIGNMENT SCHEDULE for the PROGRAM classes: one form, also indicating films and lecture coverage, was given to the teachers; the other form was given to students.)

ASSIGNMENT SCHEDULE

(The following is the ASSIGNMENT SCHEDULE for the NON-PROGRAM classes; one form, also indicating films, was given to the teachers; the other form was given to students.)

PROGRAM ASSIGNMENT SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday
PERIOD 1, 2, 3, 5 CLASSES				November 2 CONGRESS: PART 1 PROGRAM assigned
November 5 CONGRESS: PART 1 PROGRAM due CONGRESS: PART 2 PROGRAM assigned	November 6 CONGRESS: PART 2 PROGRAM due CONGRESS: PART 3 PROGRAM assigned	November 7 CONGRESS: PART 3 PROGRAM due	November 8 CONGRESS: PART 1, PART 2, PART 3 returned for review	November 9 CONGRESS: PART 1, PART 2, PART 3 turned back in EXAM ON CONGRESS
November 12 HOLIDAY	November 13 PRESIDENT AND THE NAT'L. ADM.: PART 1 assigned	November 14 PRESIDENT AND THE NAT'L. ADM.: PART 1 due PRES. AND THE NAT'L. ADM.: PART 2 assigned	November 15 PRESIDENT AND THE NAT'L. ADM.: PART 2 due PRES. AND THE NAT'L. ADM.: PART 3 assigned	November 16 PRESIDENT AND THE NAT'L. ADM.: PART 3 due PRES. AND THE NAT'L. ADM.: PART 4 assigned
November 19 PRES. AND THE NAT'L. ADM.: PART 4 due PRES. AND THE NAT'L. ADM.: PARTS 1 to 4 returned for review	November 20 PRES. AND THE NAT'L. ADM.: PARTS 1 to 4 turned back in EXAM ON THE PRES. AND THE NAT'L. ADM.	November 21 (No program assignment.)	November 22 HOLIDAYS	November 23
November 26 (No program assignment.)	November 27 COURTS PROGRAM assigned	November 28 COURTS PROGRAM due COURTS PROGRAM returned for review	November 29 COURTS PROGRAM turned back in EXAM ON COURTS	

PROGRAM ASSIGNMENT SCHEDULE (with additional information for "non-Ss")

Monday	Tuesday	Wednesday	Thursday	Friday
PERIOD 1, 2, 3, 5 CLASSES				November 2 Introduce "programs." Intro. lecture on CONGRESS. CONGRESS: PART 1 assigned
November 5 CONGRESS: PART 1 due Lecture Cong. Part 1 CONGRESS: PART 2 assigned	November 6 CONGRESS: PART 2 due Lecture Cong. Part 2 CONGRESS: PART 3 assigned	November 7 CONGRESS: PART 3 due Films: Federal Gov't. and Congress Discuss election.	November 8 CONGRESS: PARTS 1, 2, 3 ret'd for review Lecture Cong. Part 3 Review lecture on Congress	November 9 CONGRESS: PARTS 1, 2, 3 turned back in EXAM ON CONGRESS
November 12 HOLIDAY	November 13 Review exam. Intro. lecture on Pres. and Natl. Adm. PRES/NATL ADM PART 1 assigned	November 14 PRES/NATL ADM PART 1 due Lecture on PART 1 PRES/NATL ADM PART 2 assigned	November 15 PRES/NATL ADM PART 2 due Lecture on PART 2 PRES/NATL ADM PART 3 assigned	November 16 PRES/NATL ADM PART 3 due Lecture on PART 3 PRES/NATL ADM PART 4 assigned
November 19 PRES/NATL ADM PART 4 due Lecture on PART 4 Review lecture on Pres. and Natl. Adm. PARTS 1-4 ret. for review	November 20 PRES/NATL ADM PARTS 1, 2, 3, 4 turned back in EXAM ON THE PRES. AND THE NAT'L. ADM.	November 21 Review exam. (No program assignment.) Film: Vice-President (Part 1)	November 22 HOLIDAYS	November 23
November 26 Film: Vice-President (Part 2) (No program assignment.) Intro. lecture on Courts	November 27 COURTS PROGRAM assigned	November 28 COURTS PROGRAM due Lecture on Courts COURTS PROGRAM returned for review	November 29 COURTS PROGRAM turned back in EXAM ON COURTS	November 30 Review exam.

ASSIGNMENT SCHEDULE

Monday	Tuesday	Wednesday	Thursday	Friday
	P E R I O D 4 C L A S S E S			November 2 CHAPTER 16 assigned (To be read by Monday, November 5.)
November 5	November 6 CHAPTER 17 assigned (To be read by Wednesday, November 7.)	November 7	November 8	November 9 EXAM ON CONGRESS
November 12 H O L I D A Y	November 13 CHAPTER 18 assigned (To be read by Wednesday, November 14)	November 14	November 15 CHAPTER 19 assigned (To be read by Friday, November 16.)	November 16
November 19	November 20 EXAM ON THE PRES. AND THE NAT'L. ADM.	November 21	November 22 H O L I D A Y S	November 23
November 26 CHAPTER 21 assigned (To be read by Tuesday, November 27.)	November 27	November 28	November 29 EXAM ON COURTS	November 30

ASSIGNMENT SCHEDULE (with additional information for non-Ss)

Monday	Tuesday	Wednesday	Thursday	Friday
	PERIOD 4 CLASSES			November 2 CHAPTER 16 assigned (To be read by Monday, November 5.)
November 5	November 6 CHAPTER 17 assigned (To be read by Wednesday, November 7.)	November 7 Films: Federal Gov't and Congress Discuss election.	November 8	November 9 EXAM ON CONGRESS
November 12 HOLIDAY	November 13 Review exam. CHAPTER 18 assigned (To be read by Wednesday, November 14)	November 14	November 15 CHAPTER 19 assigned (To be read by Friday, November 16.)	November 16
November 19	November 20 EXAM ON THE PRES. AND THE NAT'L. ADM.	November 21 Review exam. Film: Vice-President (Part 1)	November 22 HOLIDAYS	November 23
November 26 CHAPTER 21 assigned (To be read by Tuesday, November 27.)	November 27	November 28	November 29 EXAM ON COURTS	November 30 Review exam.

APPENDIX D

LESSON PLANS FOR PROGRAM CLASSES ("Periods 1, 2, 3, 5")

(The following are complete daily lessson plans used by teachers for the PROGRAM classes.)

Friday
2 November   DAY 1 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. Introductory remarks on program-based instruction.

2. Hand out Program Assignment Schedule.

3. Introductory lecture (about 15 minutes) on topics in three programs on Congress:

CONGRESS IS THE LAW-MAKING BRANCH OF OUR FEDERAL GOVERNMENT

POWERS OF CONGRESS

THE HOUSE OF REPRESENTATIVES

Qualifications, Term, and Salary of Representatives
Membership
Reapportionment and Redistricting
Privileges of Congressmen
Sole Powers of the House
Strong and Weak Points of the House

THE SENATE

Membership
Qualifications, Term, and Salary of Senators
Sole Powers of the Senate
The Senate in Our Legislative System

SESSIONS OF CONGRESS

ORGANIZING CONGRESS

Organization of the House
Committees of the House
Party Organization in Congress
Organization of the Senate
Joint Standing Committees
Legislative Reorganization Act

KEEPING A RECORD OF PROCEEDINGS

HOW A BILL BECOMES A LAW

Introducing a Bill
Procedure in the House
Procedure in the Senate
The Conference Committee
Log-Rolling
Lobbying
The Final Step

A STILL-UNSOLVED PROBLEM

CONGRESSIONAL INVESTIGATIONS

DAY 1 (Continued)

4. Following lecture, hand out programs (CONGRESS: PART 1) to be started in class and completed at home. Check that programs are being taken to absent students.

5. Announce that completed programs are due Monday.

6. At the end of class period remind students to draw a line across the page of the program to show how much of the program they have completed.

* * * * * * * * *

Monday
5 November

DAY 2 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. List program topics (CONGRESS: PART 1) on the blackboard.

2. Collect completed programs (CONGRESS: PART 1).

3. Follow-up lecture/discussion (20 to 30 minutes) based on topics in programs completed as homework (CONGRESS: PART 1):

   CONGRESS IS THE LAW-MAKING BRANCH OF OUR FEDERAL GOVERNMENT

   POWERS OF CONGRESS

   THE HOUSE OF REPRESENTATIVES

   Qualifications, Term, and Salary of Representatives
   Membership
   Reapportionment and Redistricting
   Privileges of Congressmen
   Sole Powers of the House
   Strong and Weak Points of the House

4. Hand out programs (CONGRESS: PART 2) to be started in class and completed at home. Check that programs are being taken to absent students.

5. Hand out back programs to students who have been absent and failed to get programs at home.

6. Announce that completed programs are due tomorrow.

7. Check off students who handed in completed programs on Attendance and Assignment Control Sheet. Inform students who have not handed in programs that are due that they are delinquent.

8. Review Lesson Critiques from CONGRESS: PART 1 to spot possible lecture topics not covered in class.

9. At the end of class period remind students to draw a line across the page of the program to show how much of the program they have completed.

Tuesday
6 November DAY 3 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. List program topics (CONGRESS: PART 2) on the blackboard.

2. Collect completed programs (CONGRESS: PART 2).

3. Follow-up lecture/discussion (20 to 30 minutes) based on topics in programs completed as homework (CONGRESS: PART 2):

   THE SENATE

   Membership
   Qualifications, Term, and Salary of Senators
   Sole Powers of the Senate
   The Senate in Our Legislative System

   SESSIONS OF CONGRESS

   ORGANIZING CONGRESS

   Organization of the House
   Committees of the House
   Party Organization in Congress
   Organization of the Senate
   Joint Standing Committees
   Legislative Reorganization Act

4. Following lecture/discussion, hand out programs (CONGRESS: PART 3) to be started in class and completed at home. Check that programs are being taken to absent students.

5. Hand out back programs to students who have been absent and failed to get programs at home.

6. Announce that completed programs are due tomorrow.

7. Check off students who handed in completed programs on Attendance and Assignment Control Sheet. Inform students who have not handed in programs that are due that they are delinquent.

8. Review Lesson Critiques from CONGRESS: PART 2 to spot possible lecture topics not covered in class.

9. At the end of class period remind students to draw a line across the page of the program to show how much of the program they have completed.

Wednesday
7 November   DAY 4 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. Collect completed programs (CONGRESS: PART 3)

2. Films: Meet Your Federal Government (15 minutes)
   The Congress (20 minutes)

3. Check off students who handed in completed programs on Attendance and Assignment Control Sheet. Inform students who have not handed in programs that are due that they are delinquent.

4. Review Lesson Critiques from CONGRESS: PART 3 to spot possible lecture topics not covered in class.

5. Discuss yesterday's election.

6. Hand out back programs to students who have been absent and failed to get programs at home. Announce that the completed back programs are due tomorrow.

* * * * * * * *

Thursday
8 November   DAY 5 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. List program topics (CONGRESS: PART 3) on the blackboard.

2. Collect programs completed late and check off students who handed in programs on Attendance and Assignment Control Sheet. Inform students who have not handed in programs that are due that they are delinquent.

3. Follow-up lecture/discussion (20 to 30 minutes) based on topics in programs completed as homework (CONGRESS: PART 3):

   KEEPING A RECORD OF PROCEEDINGS

   HOW A BILL BECOMES A LAW

   Introducing a Bill
   Procedure in the House
   Procedure in the Senate
   The Conference Committee
   Log-Rolling
   Lobbying
   The Final Step

   A STILL-UNSOLVED PROBLEM

   CONGRESSIONAL INVESTIGATIONS

4. Announce that there will be an exam tomorrow on Congress (topics covered by the three programs).

5. Hand back three programs (CONGRESS: PARTS 1, 2, and 3) for review. Check that programs are being taken to absent students.

DAY 5 (Continued)

6. Hand out back programs to students who have been absent and failed to get programs at home.

7. Announce that all programs are to be handed back in tomorrow.

8. Spend rest of period on a general recap of Congress, drawing on lesson critique notes if appropriate.

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Friday
9 November DAY 6 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. Collect three programs (CONGRESS: PARTS 1, 2, and 3) that had been handed back for review, and any late programs.

2. Hand out exam on Congress.

3. Announce that when students complete exams they should hand them in and pick up questionnaires.

4. Check off students who handed back review programs and any late programs on Attendance and Assignment Control Sheets. Inform students who have not handed in programs that are due that they are delinquent.

5. About 5 minutes before the end of class collect the tests that haven't already been handed in.

6. Hand out questionnaires to students who haven't already received them.

7. Collect questionnaires at end of period.

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Tuesday
13 November DAY 7 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. Review exam on Congress.

2. Introductory lecture (about 15 minutes) based on topics in four programs on the President and the National Administration:

THE EXECUTIVE DEPARTMENT

ELECTING THE PRESIDENT

Nominating Methods
Presidential-Preference Primaries
The National Convention
The Campaign
The Election
Election Disputes

DAY 7 (Continued)

THE PRESIDENT

Qualifications, Term, and Salary of the President
Presidential Immunities
Removal from Office
The Presidential Succession

THE EXECUTIVE OFFICE

Administrative Assistants
National Security Council
Economic Advisers

THE PRESIDENT AND HIS POWERS

THE PRESIDENT'S EXECUTIVE POWERS

Power of Appointment and Removal
The President as Commander-in-Chief
Conducting Foreign Relations
Making Treaties and Executive Agreements

THE PRESIDENT'S LEGISLATIVE POWERS

Messages to Congress
The Veto Power
Patronage and National Leadership

THE PRESIDENT'S JUDICIAL POWERS

THE NATIONAL ADMINISTRATION

THE CABINET OFFICERS AND THEIR EXECUTIVE DEPARTMENTS

The Department of State
The Treasury Department
The Department of Defense
The Department of Justice
The Post Office Department
The Department of the Interior
The Department of Agriculture
The Department of Commerce
The Department of Labor
The Department of Health, Education, and Welfare

INDEPENDENT AGENCIES

The Civil Service Commission
Other Independent Agencies

REFORM MOVEMENTS

3. Following lecture, hand out programs (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 1) to be started in class and completed at home. Check that programs are being taken to absent students.

DAY 7 (Continued)

4. Announce that completed programs are due tomorrow.

5. At the end of class period remind students to draw a line across the page of the program to show how much of the program they have completed.

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Wednesday
14 November

DAY 8 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. List program topics (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 1) on the blackboard.

2. Collect completed programs (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 1).

3. Follow-up lecture/discussion (20 to 30 minutes) based on topics in programs completed as homework (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 1

   THE EXECUTIVE DEPARTMENT

   ELECTING THE PRESIDENT

   Nominating Methods
   Presidential-Preference Primaries
   The National Convention
   The Campaign
   The Election
   Election Disputes

   THE PRESIDENT

   Qualifications, Term, and Salary of the President
   Presidential Immunities
   Removal from Office
   The Presidential Succession

   THE EXECUTIVE OFFICE

   Administrative Assistants
   National Security Council
   Economic Advisers

4. Hand out programs (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 2) to be started in class and completed at home. Check that programs are being taken to absent students.

5. Hand out back programs to students who have been absent and failed to get programs at home.

6. Announce that completed programs are due tomorrow.

7. Check off students who handed in completed programs on Attendance and Assignment Control Sheet. Inform students who have not handed in programs that are due that they are delinquent.

DAY 8 (Continued)

8. Review Lesson Critiques from THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 1 to spot possible lecture topics not covered in class.

9. At the end of class period remind students to draw a line across the page of the program to show how much of the program they have completed.

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Thursday
15 November DAY 9 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. List program topics (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 2) on the blackboard.

2. Collect completed programs (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 2).

3. Follow-up lecture/discussion (20 to 30 minutes) based on topics in programs completed as homework (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 2):

   THE PRESIDENT AND HIS POWERS

   THE PRESIDENT'S EXECUTIVE POWERS

   Power of Appointment and Removal
   The President as Commander-in-Chief
   Conducting Foreign Relations
   Making Treaties and Executive Agreements

   THE PRESIDENT'S LEGISLATIVE POWERS

   Messages to Congress
   The Veto Power
   Patronage and National Leadership

   THE PRESIDENT'S JUDICIAL POWERS

4. Following lecture/discussion, hand out programs (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 3) to be started in class and completed at home. Check that programs are being taken to absent students.

5. Hand out back programs to students who have been absent and failed to get programs at home.

6. Announce that completed programs are due tomorrow.

7. Check off students who handed in completed programs on Attendance and Assignment Control Sheet. Inform students who have not handed in programs that are due that they are delinquent.

8. Review Lesson Critiques from THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 2 to spot possible lecture topics not covered in class.

DAY 9 (Continued)

9. At the end of class period remind students to draw a line across the page of the program to show how much of the program they have completed.

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Friday
16 November   DAY 10 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. List program topics (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 3) on the blackboard.

2. Collect completed programs (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 3).

3. Follow-up lecture/discussion (20 to 30 minutes) based on topics in programs completed as homework (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 3):

   THE NATIONAL ADMINISTRATION

   THE CABINET OFFICERS AND THEIR EXECUTIVE DEPARTMENTS

   The Department of State
   The Treasury Department
   The Department of Defense
   The Department of Justice
   The Post Office Department

4. Hand out programs (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 4) to be started in class and completed at home. Check that programs are being taken to absent students.

5. Hand out back programs to students who have been absent and failed to get programs at home.

6. Hand back three programs (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PARTS 1, 2, and 3) for review. Check that programs are being taken to absent students.

7. Check off students who handed in completed programs on Attendance and Assignment Control Sheet. Inform students who have not handed in programs that are due that they are delinquent.

8. Review Lesson Critiques from THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 3 to spot possible lecture topics not covered in class.

9. At the end of class period remind students to draw a line across the page of the program to show how much of the program they have completed.

Monday
19 November DAY 11 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. List program topics (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 4) on the blackboard.

2. Check off students who completed programs (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 4) on Attendance and Assignment Control Sheet. Inform students who have not completed programs that are due that they are delinquent. Tear off Lesson Critiques from the programs for use in lecture/discussion.

3. Collect programs completed late and check off students who handed in programs on Attendance and Assignment Control Sheet. Inform students who have not handed in back programs that are due that they are delinquent.

4. Follow-up lecture/discussion (20 to 30 minutes) based on topics in programs completed as homework (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PART 4):
   The Department of the Interior
   The Department of Agriculture
   The Department of Commerce
   The Department of Labor
   The Department of Health, Education, and Welfare

   INDEPENDENT AGENCIES

   The Civil Service Commission
   Other Independent Agencies

   REFORM MOVEMENTS

5. Announce that there will be an exam tomorrow on The President and the National Administration (topics covered by the four programs).

6. Hand back three programs (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PARTS 1, 2, and 3) for review. Check that programs are being taken to absent students.

7. Hand out back programs to students who have been absent and failed to get programs at home.

8. Announce that all programs are to be handed back in tomorrow.

9. Spend rest of period on a general recap of The President and the National Administration, drawing on Lesson Critique notes if appropriate.

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Tuesday
20 November DAY 12 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. Collect four programs (THE PRESIDENT AND THE NATIONAL ADMINISTRATION: PARTS 1, 2, 3, and 4) that had been handed back for review, and any late programs.

DAY 12 (Continued)

2. Hand out exam on the President and the National Administration.
3. Announce that when students complete exams they should hand them in and pick up questionnaires.
4. Check off students who handed back review programs and any late programs on Attendance and Assignment Sheets. Inform students who have not handed in programs that are due that they are delinquent.
5. About 5 minutes before the end of class collect the tests that haven't already been handed in.
6. Hand out questionnaires to students who haven't already received them.
7. Collect questionnaires at end of period.

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Wednesday
21 November DAY 13 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. Review exam on the President and the National Administration.
2. Film: The Vice-President, Part 1 (30 minutes).

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Monday
26 November DAY 14 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. Film: The Vice-President, Part 2 (30 minutes).
2. If time permits, begin introductory lecture (about 15 minutes) on topics in the program on Our Federal Court System:

OUR FEDERAL COURT SYSTEM

WAYS OF CLASSIFYING FEDERAL COURTS

Levels of Courts
Constitutional and Legislative Courts
Courts of Original and Appellate Jurisdiction

THE SUPREME COURT

THE THREE CHIEF LEGISLATIVE COURTS

U.S. Customs Court
Court of Customs and Patent Appeals
Tax Court of the United States

OTHER POWERS OF THE FEDERAL COURTS

FEDERAL COURT OFFICIALS

Tuesday
27 November   DAY 15 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. If necessary, complete introductory lecture on Our Federal Court System.

2. Following lecture, hand out programs (OUR FEDERAL COURT SYSTEM) to be started in class and completed at home. Check that programs are being taken to absent students.

3. Announce that completed programs are due tomorrow.

4. At the end of class period remind students to draw a line across the page of the program to show how much of the program they have completed.

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Wednesday
28 November   DAY 16 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. List program topics (OUR FEDERAL COURT SYSTEM) on the blackboard.

2. Check off students who completed programs (OUR FEDERAL COURT SYSTEM) on Attendance and Assignment Control Sheet. Inform students who have not completed programs that are due that they are delinquent. Tear off Lesson Critiques from the programs for use in lecture/discussion.

3. Follow-up lecture/discussion (20 to 30 minutes) based on topics in programs completed as homework (OUR FEDERAL COURT SYSTEM).

   OUR FEDERAL COURT SYSTEM

   WAYS OF CLASSIFYING FEDERAL COURTS

   Levels of Courts
   Constitutional and Legislative Courts
   Courts of Original and Appellate Jurisdiction

   THE SUPREME COURT

   THE THREE CHIEF LEGISLATIVE COURTS

   U.S. Customs Court
   Court of Customs and Patent Appeals
   Tax Court of the United States

   OTHER POWERS OF THE FEDERAL COURTS

   FEDERAL COURT OFFICIALS

4. Announce that there will be an exam tomorrow on Our Federal Court System (topics covered by the program).

5. Hand out back programs to students who have been absent and failed to get programs at home.

6. Announce that all programs are to be handed in tomorrow.

7. Spend rest of period on a general recap of Our Federal Court System, drawing on Lesson Critiques if appropriate.

Thursday
29 November DAY 17 LESSON PLAN FOR PERIODS 1, 2, 3, and 5

1. Collect programs (OUR FEDERAL COURT SYSTEM) that had been used for review, and any late programs.

2. Hand out exam on Our Federal Court System.

3. Announce that when students complete exams they should hand them in and pick up questionnaires.

4. Check off students who handed back review programs and any late programs on Attendance and Assignment Control Sheets. Inform students who have not handed in programs that are due that they are delinquent.

5. About 5 minutes before the end of class collect the tests that haven't already been handed in.

6. Hand out questionnaires to students who haven't already received them.

7. Collect questionnaires at end of period.

APPENDIX E

ATTENDANCE AND ASSIGNMENT CONTROL SHEET

(The following form was used by teachers to accurately monitor the completion of programs.)

ATTENDANCE AND ASSIGNMENT CONTROL SHEET

Monday ( ) Tuesday ( ) Wednesday ( ) Thursday ( ) Friday ( )

(Dates noted in parentheses under each day of the school week.)

(Nature of assignment noted here; eg., CONGRESS: PART 1, etc.)

STUDENT NAMES	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT

APPENDIX F

SAMPLES OF WRITE-IN PROGRAMS

(The following are sample pages from the write-in programs used in the Fall 1962 field test. Three program booklets totaling 55 pages were used for the segment on Congress; four program booklets totaling 60 pages were used for the segment on The President and the National Administration; one program booklet of 17 pages was used for the segment on Our Federal Court System.)

THE CONFERENCE COMMITTEE

A bill passed by one house does not always pass the other house in the same form in which it passed the first. Sometimes a bill passes one ______________ in a slightly different form from the form in which it has p______________ the other. But to become a law, a bill must pass both houses in the same f__________. So when there are ____________________ between the final Senate and ________________ versions of a bill, it must go to a Conference Committee. The presiding officer of each house appoints members from his house to sit on a committee to iron out these differences. This committee is called the C__________________ C__________________.

The purpose of the Conference Committee is to eliminate or get rid of ________________ between the Senate and the __________________ versions of a bill that has already ________________ both houses. If a bill has passed both houses in the same form there is no need of a ____________________ ____________________. A Conference Committee is called a Conference Committee because it is a committee that c______________ on how to make the Senate and House versions of a ______________ the same.

After the Conference Committee has agreed on a version of the bill that it thinks will be acceptable to both ______________, then the two houses have to vote again on the bill. Usually they both ______________ to pass it.

Neither house can amend or change the version of a bill that has been worked out by the Conference Committee. It must be either ________________ or rejected in the form that the Conference Committee has decided on, though they can send it back to the C______________ C________________ and ask them to improve it.

About one bill in ten passes the House and ______________ in different versions and therefore goes to a ____________________ ________________. Since the version suggested by this committee

{can
{can not be changed, this gives a good deal of power to the Conference Committee.

A REVIEW

The ex________________ branch of our Federal government is now a large and very complex organization. Immediately under the President is his Cabinet. Each of these C____________ officers is also the head of a major executive d________________. There are ten regular C____________ members, which means that there also are (number)__________ ________________ departments. Cabinet officers are appointed by the ______________, but the upper house of Congress, the ________________, must approve them.

Apart from these ten executive departments, Congress has created various independent b____________ and c____________________ to take care of other types of government activity. One of these i______________ commissions is the Civil Service Commission, which has the responsibility of finding the most competent people to fill g________________ positions. Most government jobs are filled by people chosen by the ______________ __________________ Commission.

There are a few helpers which the President is able to appoint without the approval of the S____________. These people are his administrative assistants. A____________________ ________________ help the __________________ by collecting information for him.

The P________________ gets ec________________ and financial advice from the Bureau of the Budget and the Council of Economic Advisers. How much money the government takes in and pays out is the concern of the B____________ __ _____ ______________, whereas the Council of ________________ ______________ is more concerned with matters which affect the economic condition of the entire country.

Finally, if the President wanted advice on matters concerning national defense, he would take this up with the National ______________ Council which is concerned with our nation's security.

Many reforms have been made in the ex__________________ branch of our Federal government, but still more are being considered.

case is carried higher to the ____________ ____________.
If eight judges try the case and four of them think the verdict of the lower court was right and four think it was wrong, then
(the man is acquitted.
(the decision of the lower court stands, and he is not acquitted.
So if half the Supreme Court judges decide one thing and the other half decide the opposite thing, it is called a ________ vote and the decision of the lower court is upheld. But if one man more than half of all the Supreme Court judges trying the case come to a certain decision, it is called a m______________ vote and whatever this majority vote decides becomes the S______________ ____________________'s decision.

Justices who disagree with the majority opinion sometimes write a "dissenting opinion" explaining why they think the decision was
(right.
(wrong.
A justice who writes a dissenting opinion on a case is not in the ______________ but in the minority. A d________________ opinion is a m_______________ opinion.

Sometimes all the judges vote the same. When this happens, we say that the decision is unanimous. A 9 - 0 decision is a ________________ ____________________. In their unanimous decision on school desegregation, the nine Supreme Court ______________ voted (number)________ to (number)________ .

The Supreme Court has both original and appellate jurisdiction. The original jurisdiction of the Supreme Court includes all cases regarding ministers, ambassadors, and consuls. These high officers of the Foreign Service are tried first in the ____________ ______________, as a court of __________________ ________________.

When the Supreme Court is the first court to try a case, it acts as a court of ______________ __________________. When it tries a case that has already been tried in a lower court, it acts

APPENDIX G

LESSON CRITIQUE

(The following is the form completed by students in PROGRAM classes before each program booklet was handed in.)

LESSON CRITIQUE

NAME ______________________ PERIOD ______ DATE ______________

Write your reactions to the material covered in the program, under the headings below. Be as specific as possible.

WHAT TOPICS ARE NOT CLEAR, OR NEED MORE EXPLANATION?

WHAT TOPICS WOULD YOU LIKE TO KNOW MORE ABOUT?

APPENDIX H

CRITERION TESTS

(The following are the criterion tests administered to PROGRAM and NON-PROGRAM classes during the Fall 1962 field test.)

NAME______________________________PERIOD_________

U.S. GOVERNMENT EXAMINATION : CONGRESS

MULTIPLE CHOICE

Please write the letter in front of the BEST answer in the blank at the left of each question.

______1. Compared to Representatives, Senators:
A. can be younger
B. have the same base pay
C. have fewer fringe benefits
D. serve a shorter term
E. are less experienced

______2. A certain city has a rule saying that children must attend whatever school is nearest their homes. The city builds new schools so that the colored children will all be nearest to one particular school. This city is maintaining segregation by means of:
A. filibustering
B. gerrymandering
C. closure
D. pork-barrel legislation

______3. When population moved westward in the nineteenth century it affected the size of the Senate only because:
A. some states lost population
B. some states gained population
C. new states entered the Union
D. the western states had larger areas

______4. A U.S. Senator is elected to office for a term of:
A. 2 years
B. 4 years
C. 6 years
D. 4 sessions of Congress

______5. The Speaker of the House of Representatives is:
A. appointed by the President
B. elected by the House Rules Committee
C. elected directly by the people
D. chosen by the majority party in the house

______6. Suppose a state lost population heavily but could not agree on redistricting. What would happen?

- A. it could not send any Representatives to Congress until it did redistrict
- B. an arbitrary redistricting would be done by Federal officials
- C. the old districting could be used, but a certain number of the elected Representatives would be elected from the state at large
- D. all representatives would be elected from the state at large

______7. The actual drawing or setting of Congressional district boundaries is done by:

- A. the State Legislature
- B. the Census Bureau
- C. the Congress
- D. the President

______8. "Pro tempore" means

- A. professional
- B. timely
- C. temporary
- D. appointed

______9. A certain savage tribe is governed by a Council of Elders (one from each village) and by a group of warriors (each one chosen to represent 100 natives). Its government is:

- A. bicameral
- B. tyrannous
- C. federal
- D. confederate
- E. monarchic

______10. A friend once said to a local candidate who was running for office, "You can't miss . . . Eventually, that is. If you don't make it this time, we'll keep moving those boundaries until you do." He was suggesting:

- A. pork-barrel legislation
- B. log-rolling
- C. a lockout
- D. a gerrymander

______11. Which of the following is a party organization, made up of members of only one party?
A. Steering Committee
B. Rules Committee
C. Legislative Committee
D. Joint Standing Committee

______12. Impeachment proceedings can be begun only by:
A. the Senate
B. the House
C. two-thirds of each house, voting separately
D. two-thirds of both houses, voting together
E. the President

______13. When we say someone is impeached, we mean he is:
A. accused
B. tried
C. convicted
D. punished

______14. The "upper house" of our national legislature is called:
A. Congress
B. the Senate
C. the House of Representatives
D. the National Assembly

______15. The means designed to provide adequate representation for everyone in spite of population shifts is called:
A. gerrymandering
B. log-rolling
C. reapportionment
D. patronage

______16. Congressman Blank sent all his Christmas cards without paying any postage on them. In doing this he made wrong use of:
A. Congressional immunity
B. the franking privilege
C. seniority rule
D. lobbying

______17. A Congressman could be punished for:

A. a speech in the Senate saying that television manufacturers are over-charging the public
B. an attack in committee on the John Birch Society
C. condemning an individual by name in a speech given in Congress
D. a traffic violation

______18. Which one of the following is sometimes considered as a weak point of the House of Representatives rather than of the Senate?

A. small size
B. short term of office
C. failure to represent city areas
D. inability to introduce money bills

______19. Which one of the following is a sole power of the House of Representatives?

A. to elect the Vice-President when the Electoral College cannot.
B. to impeach a Federal judge who is said to have taken bribes
C. to vote on appointments made by the President
D. to ratify treaties

______20. With the passage of time the number of people represented by a member of the House of Representatives has:

A. decreased
B. increased
C. remained the same
D. fluctuated

______21. The Congress of the United States:

A. is the law-making branch of our Federal Government
B. is unilateral in structure
C. is provided for in Article III of the Constitution
D. is responsible for administering and interpreting the laws

_______22. The House and the Senate have many standing committees to discuss proposed legislation. Each standing committee deals with a different:

A. part of the world
B. part of the country
C. version of the proposed bill
D. kind of subject
E. aspect of the proposed bill

_______23. Which one of the following Congressmen is most likely to be made chairman of the Committee on Agriculture in the House of Representatives?

A. one from the minority party
B. one who has a farm of his own
C. one who has been a member of the House for many years
D. one who has a close acquaintance with the President

_______24. If California's population grows to four times its present size by the year 2000, but the country in general has only twice as much population, about how many representatives will California have in the year 2000?

A. twice as many
B. only a few more than now
C. the same number as now
D. fewer than now

_______25. A man is elected Senator but is refused entrance to the Senate because of his membership in a certain society. Who refuses him entrance?

A. the President
B. the Senate
C. Congress
D. the Supreme Court

_______26. A bill to increase immigration:

A. must originate in the House
B. must originate in the Senate
C. may originate in either house
D. would be unconstitutional

______27. Attempts have been made to regulate lobbying by:
   A. the closure rule
   B. requiring all lobbyists to register
   C. making professional lobbying illegal
   D. printing all statements made by lobbyists

______28. To become a law, a bill must always be approved by:
   A. one house of Congress and the President
   B. both houses of Congress and the President
   C. both houses of Congress
   D. the President

______29. Members of the House may use all of these means of voting except:
   A. viva voce
   B. rising
   C. Australian ballot
   D. roll call

______30. What happens if a bill passes the House of Representatives in one form and the Senate in another form?
   A. the President must decide which to sign and which to veto
   B. the differences are eliminated by the Conference Committee
   C. the Senate and House vote together as to which form to adopt
   D. the Senate version is adopted
   E. the House version is adopted

______31. The number of members required in attendance before official business can be transacted is called a:
   A. committee of the whole
   B. plurality
   C. caucus
   D. quorum
   E. majority

______32. The President can use a pocket veto:

- A. by holding a bill for ten days
- B. when Congress adjourns within ten days after passing a bill
- C. to block any legislation he does not approve of
- D. by a veto within ten days after a bill is passed by Congress

______33. The Rules Committee is the most important political body in the House because:

- A. it controls the time allotted to debate on bills
- B. it can prevent a bill from being considered in the House
- C. it can change the power and jurisdiction of the various House committees whenever it wishes
- D. it determines the order in which bills may be considered
- E. all of the reasons given above are true

______34. Division of labor, so that specialization is possible, is the reason for our legislature's:

- A. bicameral system
- B. bipartisan system
- C. party system
- D. committee system
- E. system of checks and balances

______35. The graveyard of proposed laws is the:

- A. House of Representatives
- B. Senate
- C. White House
- D. standing committee

______36. As a Congressman, if you wished to have a bill written, you would consult:

- A. the Legislative Reference Service
- B. the Speaker
- C. the Private Calendar
- D. an attorney

______37. Senator Blank from a uranium-mining Rocky Mountain state agrees to vote for Federally-financed apartments in the great cities if Senator So-and-so from New York will vote for Federal support of uranium prices. The two senators are engaging in:

A. boondoggling
B. junketing
C. log-rolling
D. lobbying
E. filibustering

______38. Which one of the following bills could not be introduced in the Senate?

A. one to send an American ballet troupe abroad
B. one to raise the tax on women's handbags
C. one to deepen an Alaska harbor
D. one to lower the voting age
E. one to fix railroad rates

______39. A filibuster is used:

A. only in the Senate
B. in the Senate and House
C. only in the House
D. in neither the Senate nor the House

List powers given to Congress in Article I, Section 8 of the Constitution:

1.

2.

3.

4.

5.

6.

7.

8.

9.

TRUE - FALSE

Please write T or F in the blank at the left of each statement. If a statement is partially false consider it totally false.

_____1. The floor leader manages his party in Congress, plans strategy, and allots time to the party's speakers.

_____2. The President decides the date on which Congress is to adjourn when the two houses cannot agree on it.

_____3. The President of the Senate is Lyndon Johnson.

_____4. Congress is empowered to make Congressional Investigations into any sphere of our lives.

_____5. The House of Representatives has a higher status and more prestige than the Senate.

_____6. The periodic enumeration or count of the people is called a census.

_____7. Very special training is necessary in order to qualify for election as a member of the legislative branch of our government.

_____8. Both houses of Congress must pass on all appointments made by the President.

_____9. By a two-thirds majority, the Senate must consent to treaties made by the President before they can go into effect.

_____10. One method of nominating members of Congress is known as direct primary.

_____11. The purpose of Congressional immunity from libel suits is to make sure that Congressmen have freedom of speech.

_____12. The party whip polls party members to determine the support of bills.

_____13. A bill that will involve the spending of money must originate in the Senate.

_____14. The Senate and the House have to vote on a bill in the form it is received from the Conference Committee.

_____15. If the President vetoes a bill, it requires a three-fourths vote of both houses to over-ride his veto.

_____16. The Closure Rule was adopted to restrict the activities of lobbyists.

_____17. Unlimited debate is one of the ways that a minority group can maintain an influence in government.

_____18. Bills concerning individuals are placed on a list called the Private Calendar.

_____19. Pork-barrel legislation refers to bills which are referred to conference committees

_____20. When an entire legislative body meets as a committee it is called a committee of the whole.

_____21. A bill, to become law, has to pass the lower house first and then the upper house.

NAME______________________________PERIOD_________

U.S. GOVERNMENT EXAMINATION: THE PRESIDENT AND THE NATIONAL ADMINISTRATION

MULTIPLE CHOICE

Please write the letter in front of the BEST answer in the blank at the left of each question.

_____1. To win the election a candidate for the Presidency must have at least:

A. a majority of the electoral votes
B. two-thirds of the electoral votes
C. a majority of the popular votes
D. a plurality of the electoral votes

_____2. In most states the delegates to the national conventions that choose the presidential candidates are chosen by:

A. the people
B. the state party conventions
C. the previous national convention
D. the County Board of Supervisors

_____3. A bill passes Congress and goes to the President for approval or veto. Suppose the President is generally in favor of the bill but thinks it takes in too much territory. Can he approve it in modified form?

A. Yes, if he has already vetoed it once
B. Yes, if Congress does not pass it again in its original form
C. Yes, if it would cost no more in the new form
D. No

_____4. According to the Hatch Act:

A. no federal employee may participate in a political campaign
B. no one may give over $5000 to any political committee
C. persons on relief are not allowed to vote
D. time off from the job must be given for voting
E. campaign workers cannot be paid

_____5. If the President appointed a new head for the Central Intelligence Agency, the appointment would have to be approved by:

A. the House of Representatives
B. the Senate
C. both Houses of Congress
D. the Electoral College
E. the Central Intelligence Agency

_____6. The Speaker of the House is next in line after the Vice-President, to succeed to the Presidency after the President's death. Formerly the Secretary of State was next in line. The change was made because:

A. it is essential for the person succeeding to the Presidency to be of the same party as the President in order to provide continuity
B. there is always a Speaker of the House but there is not always a Secretary of State
C. it was felt that the Secretary of State already had too much power
D. the Secretary of State is named by appointment and therefore may not reflect the will of the people

_____7. In the Electoral College each state of the Union has at least how many votes?

A. One
B. Two
C. Three
D. Four

_____8. The State of Colorado sends eight representatives to the House of Representatives. How many votes does it have in the Electoral College?

A. One
B. Three
C. Eight
D. Ten
E. Not enough information is given to answer this question

_____9. The only President to serve more than two terms (full terms) was:

A. Woodrow Wilson
B. Franklin D. Roosevelt
C. Harry Truman
D. Theodore Roosevelt

_____10. If the Cabinet agrees unanimously on a certain course of action, the President:

A. must follow it
B. must follow it if he cannot convince at least 1/3 of the Cabinet that his point of view is right
C. can do as he likes regardless of what the Cabinet thinks

_____11. The Bureau of Mines would be concerned with all of the following except:

A. raising miners' wages
B. preventing waste of natural gas
C. production of a rare gas
D. development of improved safety helmets for miners
E. checking the quality of coal used in the furnaces of Army barracks

_____12. If the Secretary of State is to be fired, who fires him?

A. The Department of State
B. The President
C. The Senate
D. The President and the Senate
E. Both houses of Congress voting together

_____13. The independent offices, agencies, and commissions are called independent because they are independent of:

A. the President
B. Congress
C. the major government departments
D. public opinion
E. state rule

_____14. The chief purpose of the Department of Agriculture is to:

A. control agricultural surpluses
B. increase the efficiency of agricultural production
C. control harmful insects and plant diseases
D. carry out an educational program
E. set prices for food and fiber products

_____15. All of the following are independent agencies except the:

A. Federal Civil Service Commission
B. Interstate Commerce Commission
C. Federal Communications Commission
D. National Labor Relations Board
E. Bureau of Mines

_____16. The Department of Labor is most concerned with:

A. solving unemployment problems arising from automation
B. keeping wages low enough for American manufacturers to compete with those of Europe
C. protecting laborers' voting rights
D. relaxing the immigration laws
E. providing pensions for disabled veterans

____17. If it were not that they already have too much work to do without it, the work of the various independent boards and commissions of the United States government would be done by the:

- A. Senators
- B. Representatives
- C. Supreme Court judges
- D. governors of the various states
- E. executive departments

____18. The legal arm of our Federal Government is:

- A. the F.B.I.
- B. the Department of Justice
- C. the Supreme Court
- D. the legislative branch of the government

____19. The Narcotics Bureau is one of the divisions of:

- A. the Department of Commerce
- B. the Department of Labor
- C. the Department of Health, Education, and Welfare
- D. the Treasury Department

____20. If you were Secretary of State today, which of the following would not be a responsibility of your department?

- A. Publish all the laws passed by Congress
- B. Publish all the proclamations issued by the President
- C. Administer the Foreign Service
- D. Supervise the collection of tariffs on goods

____21. Social security is administered by the Department of:

- A. the Interior
- B. Labor
- C. the Treasury
- D. Health, Education, and Welfare
- E. Commerce

____22. If the United States government's State Department follows a foreign policy toward Latin America that is a failure, who ultimately is responsible?

- A. The Cabinet
- B. The Secretary of State
- C. The President
- D. Congress
- E. The Foreign Service

_____23. The Treasury Department of the United States has the power to:

- A. lay taxes
- B. collect taxes
- C. impose duties
- D. to borrow money on the credit of the United States

_____24. Which one of the following is not an executive Cabinet officer?

- A. Attorney-General
- B. Secretary of the Interior
- C. Secretary of War
- D. Postmaster General

_____25. The heads of executive departments are also:

- A. Foreign Service officers
- B. Cabinet members
- C. civil-service appointees
- D. legislators
- E. active party members

_____26. The chairman of the Joint Chiefs of Staff is:

- A. a civilian appointed by the President
- B. a military officer
- C. head of the Departments of the Army, Navy, or Air Force
- D. a military man appointed by the Secretary of Defense
- E. the Secretary of Defense

_____27. The President and Vice-President are guarded chiefly by the:

- A. FBI
- B. Civil Service
- C. Secret Service
- D. Coast Guard
- E. Marines

_____28. The Department of Defense was established to:

- A. improve co-operation among the armed forces
- B. make it easier to negotiate with organizations such as NATO
- C. make it possible for all military affairs to be administered from the Pentagon
- D. prevent too great a centralization of military power
- E. give the President more power as commander-in-chief

_____29. If you were an employee of the Bureau of Mines, you would be under:
   A. the Department of Agriculture
   B. the Department of Defense
   C. the Department of Commerce
   D. the Department of the Interior

_____30. Co-operation among the military services has been made especially necessary by the:
   A. need for missile and space research
   B. reduced authority of the Joint Chiefs of Staff
   C. tax burden involved in payments to veterans
   D. need for extending defense contracts to small business
   E. need for forces that could fight small "brushfire" wars

_____31. The Post Office Department loses money every year, chiefly because:
   A. the building of new post-offices is carried on in times of depression as a form of work relief
   B. the Post Office has to pay part of the expenses of the railroads and highway system over which the mail is carried
   C. the Post Office also supports a banking system
   D. a great deal of mail is carried at less than cost

_____32. The President need not take the advice of his cabinet if:
   A. the vote does not reach a majority
   B. one cabinet member abstains from voting
   C. other competent advice contradicts it
   D. he disagrees with it
   E. Congress is opposed to it

_____33. If you were in the Secret Service, you would be working for:
   A. the Department of Justice and the F.B.I.
   B. the Navy Department
   C. the Treasury Department
   D. the State Department

____34. Most of the money for expensive presidential campaigns comes from:

A. state tax funds
B. congressional appropriations
C. contributions of $1000 or less
D. a very few wealthy individual contributors

____35. The powers of the President have been broadened over the years by the action of strong individual Presidents and by:

A. the Constitution
B. the State Legislatures
C. agreement between the two major parties
D. Congress

____36. Which one of the following states would lose most voting power by having a presidential election thrown into the House of Representatives?

A. Alabama
B. Montana
C. Vermont
D. California
E. West Virginia

____37. The Hoover Commission's purpose was to:

A. improve government efficiency
B. strengthen international relations
C. reorganize the Republican Party
D. assist the under-developed nations
E. insure civil rights

____38. Immigration and naturalization affairs are taken care of by the Department of:

A. Health, Education and Welfare
B. Labor
C. State
D. Defense
E. Justice

____39. How are delegates to the national nominating conventions chosen in most of the states?

A. By presidential-preference primaries
B. By popular vote of all voters
C. By state party conventions
D. By caucus of party leaders in the state government

____40. A certain presidential candidate, from out of the state, wins the presidential-preference primary in a very small state. Of what advantage is this to him?

A. The state's delegates are pledged to support him at the national convention
B. He is sure of at least three votes in the Electoral College
C. He becomes a "favorite-son" candidate
D. The state party organization guarantees him campaign expenses

____41. The government tries to limit campaign contributions by any one person, chiefly because:

A. it wants all persons to participate in citizenship activities
B. if one person gave a large sum he might expect favors in return
C. presidential campaigns are already too long and too much of a drain on the energy of the candidate
D. large contributions to one party would put the other at too much of a disadvantage

____42. Power over the United States' foreign affairs is divided between the President and the:

A. Congress
B. Supreme Court
C. Department of Defense
D. state governments
E. United Nations

____43. Bureaus of the Department of Commerce do all of the following except:

A. set up qualifications for pilots of private planes
B. predict hurricanes
C. promote overseas trade
D. protect the rights of inventors
E. protect factory workers

____44. How does Congress usually exercise control over members of the Cabinet?

A. By impeaching them
B. Through the President
C. By its power of limiting funds
D. By referendum
E. By the spoils system

____45. A continuing problem of our national defense establishment is:

A. lack of a seat on the Cabinet
B. the Army, Navy, and Air Force carrying on separate but similar work
C. concentration of all research in the Army
D. military ownership of most of the means of defense production
E. civilian control of atomic energy

____46. The head of the Department of Justice is known as the:

A. Chief Justice
B. Attorney General
C. Secretary of Justice
D. Adjutant
E. Secretary General

Write the name of the department headed by each of the following cabinet officers:

1. Robert McNamara ____________________

2. Luther Hodges ____________________

3. Stewart Udall ____________________

4. Dean Rusk ____________________

Classify the President's Powers

In Column B on the right are the different kinds of powers exercised by the President. On the left in Column A are some specific powers. Place the letter of the correct type of power listed in Column B beside the number for each item in Column A.

A

_____1. He appoints cabinet members

_____2. He grants pardons

_____3. He delivers the State of the Union message

_____4. He sends special messages to Congress

_____5. He delivers the Budget message

_____6. He vetoes bills

_____7. He appoints Federal judges

_____8. He is Commander-in-Chief of the armed forces

_____9. He guarantees to every state a republican form of government

_____10. He conducts foreign affairs

_____11. He may pocket-veto a bill

_____12. He grants reprieves

_____13. He negotiates treaties

_____14. He grants amnesties

_____15. He may suspend the writ of habeas corpus in extreme national emergency

B

A. Executive power
B. Legislative powe
C. Judicial power

TRUE - FALSE

Please write T or F in the blank at the left of each statement. If a statement is partially false consider it totally false.

_____1. Only the President has the power to declare war.

_____2. Congress can override a "pocket veto" by a two-thirds vote of both houses.

_____3. The National Chairman of each party is generally selected by its presidential candidate.

_____4. Although the President may negotiate treaties with foreign countries, all such treaties must be ratified by a two-thirds vote of the Senate.

_____5. The President can restrict the power of the legislative branch through use of the veto but he has no control over the judicial branch.

_____6. The President can accept part of a bill and veto part of it due to his "item veto" power.

_____7. A presidential candidate can receive a majority of the popular votes in the nation and yet receive a minority of the electoral votes.

_____8. The Cabinet shares with the President the responsibility for Congressional action in a time of national emergency.

_____9. The Patent Office is part of the Department of the Interior.

_____10. The FBI is a division of the Treasury Department.

_____11. Cabinet members have the right to appear before Congressional Committees and present their views but may not vote on bills.

_____12. The President may dismiss a cabinet officer without the approval of the Senate.

_____13. The Pure Food and Drug Administration is under the Department of Commerce.

_____14. The Department of Commerce is to business what the Department of Labor is to workers.

_____15. Independent bureaus and commissions, as well as administrative assistants to the President, are under the jurisdiction of the Departments of the Cabinet.

_____16. The U.S. Constitution makes no provision for the President's Cabinet.

_____17. The Treasury Department of the United States has the power to "lay and collect taxes, duties, imposts and excises."

_____18. The Vice-President now sits in with the President's Cabinet and is a member of the National Security Council.

_____19. Independent boards and commissions are usually created by the President.

NAME______________________________PERIOD__________

U.S. GOVERNMENT EXAMINATION: OUR FEDERAL COURT SYSTEM

MULTIPLE CHOICE

Please write the letter in front of the BEST answer in the blank at the left of each question.

_____1. How many justices now sit on the Supreme Court of the United States?

- A. 10
- B. 6
- C. 9
- D. 12

_____2. Failure to obey a court order or an attack on the dignity of the court may be ruled:

- A. treason
- B. contempt of court
- C. sedition
- D. unconstitutional

_____3. In addition to rendering decisions in the Supreme Court, Supreme Court judges:

- A supervise the work of the appellate courts
- B. sit as non-voting members of the Senate
- C. advise the Senate and House legislative committees
- D. act as circuit judges in the state courts

_____4. If it were found that a new kind of Federal court was needed, who would establish it?

- A. The President
- B. Congress
- C. The Judges of the Supreme Court
- D. The people, through an amendment to the Constitution

_____5. Which one of the following is an injunction?

- A. A court order to stop hauling dirt over residential streets
- B. A statement as to why a person has been imprisoned in the county jail
- C. A merger between two companies that make the same type of product
- D. An order to pay a fine for contempt of court

_____6. Federal District Courts were established by:

- A. the Judiciary Act of 1789
- B. the Congress under the Articles of Confederation
- C. the First Ten Amendments
- D. the Supreme Court

_____7. People who break the laws of the United States are usually brought before:

- A. justices of the peace
- B. county courts
- C. state courts
- D. Federal District Courts
- E. appellate courts

_____8. Federal courts are classified as constitutional or legislative according to:

- A. the authority by which they were established
- B. the kind of cases they try
- C. the way their judges are selected
- D. whether they have original or appellate jurisdiction
- E. whether or not they can issue injunctions

_____9. Which of the following is a Constitutional Court?

- A. Customs Court
- B. Consular Court
- C. Tax Court of the U.S.
- D. Supreme Court

_____10. What is the main difference in function between state courts and Federal courts?

- A. Federal courts deal with violations of Federal law and state courts deal with violations of state law
- B. Federal courts deal with more important cases than state courts
- C. Cases can be appealed from a state but not from a Federal court
- D. Federal courts deal only with violations of the Constitution itself

_____11. Which of the following are cases over which the Federal District Courts have no jurisdiction?
- A. Cases involving ministers and ambassadors
- B. Cases involving internal revenue
- C. Cases in bankruptcy
- D. Anti-trust cases

_____12. Precedents established by judges when they interpret and apply laws that have been passed by legislative bodies are called?
- A. criminal law
- B. civil law
- C. statutory law
- D. legislative law
- E. common law

_____13. A court that has appellate jurisdiction is one that can:
- A. try a case for the first time
- B. decide on whether a case has been properly tried
- C. try Federal cases
- D. try non-Federal cases
- E. enforce its decisions

_____14. Who appeals a case from a District Court?
- A. The judge
- B. The losing party
- C. The District Attorney
- D. The United States marshal

_____15. Courts of original jurisdiction differ from courts of appellate jurisdiction in that courts of original jurisdiction:
- A. try offenses against both state and Federal laws
- B. try offenses only against state laws
- C. do not try cases where large amounts of money are involved
- D. try cases that have not been decided before
- E. try cases that have already been decided once or more

_____16. Which of the following do not fall within the original jurisdiction of the Supreme Court?

A. Suits brought against any one of the states
B. Suits brought by a state against citizens of another state
C. Cases involving violation of a Federal law
D. Cases affecting ambassadors and ministers

_____17. Which of the following has original jurisdiction?

A. Court of Appeals
B. District Court
C. Court of Customs Appeal
D. The General Court

_____18. "The Federal judiciary is organized much like a three-level pyramid." In this pyramid the middle level is the:

A. United States Court of Appeals
B. District Court of the United States
C. United States Court of Claims
D. Territorial Court

_____19. The U.S. Court of Claims deals with:

A. criminal offenses against the Federal government
B. political offenses against the government
C. money claims against the government
D. the government's claims against private individuals

_____20. In a Federal Court of Appeals a case is tried by a:

A. jury
B. single judge
C. panel of judges
D. board of legal experts in the field of government affected
E. mediation board

_____21. All of the following are Federal courts except the:

A. District Court
B. Juvenile Court
C. Court of Claims
D. U.S. Customs Court
E. Court of Customs and Patent Appeals

_____22. How many of the cases involving breaking of Federal, civil, and criminal law are settled in the District Courts?

A. All such cases, both civil and criminal
B. Most of such cases, both civil and criminal
C. Most of the criminal cases only
D. Most of the civil cases only
E. Only a minority of both civil and criminal cases

_____23. The Federal Courts of Appeals consider cases that have already been tried in:

A. municipal courts
B. state courts
C. municipal and state courts
D. district courts
E. circuit courts

_____24. The chief advantage of giving judges a lifetime appointment is that of:

A. making sure that they are men of extensive legal experience
B. making judges of very high ability available for many years of service
C. saving on the cost of pensions
D. creating judicial teams that are accustomed to working together
E. enabling them to make their decisions without political pressure

_____25. Suppose the other members of the class want to postpone a party because there is not money enough in the treasury, but you want to postpone it because you need the time for studying. Yours is:

A. an assenting opinion
B. a dissenting opinion
C. a concurring opinion
D. an abstaining opinion

_____26. All of the following are legislative courts except the:

A. Supreme Court
B. Tax Court of the United States
C. United States Customs Court
D. Court of Customs and Patent Appeals

_____27. The United States Customs Court rules on whether:
A. tax laws are valid
B. customs officers are qualified
C. import taxes are correctly estimated
D. cases have been tried properly in a lower court
E. certain goods may enter the United States

_____28. Judges of the Tax Court of the United States:
A. are chosen by election
B. also judge patent cases
C. belong to the executive rather than the judicial branch
D. also sit on other courts in which they do have tenure
E. are appointed by the President and therefore can be removed by him at any time

_____29. The Tax Court of the United States deals with all of the following except:
A. income taxes
B. import taxes
C. excess-profits taxes
D. estate taxes
E. gift taxes

_____30. A mandamus and an injunction are both:
A. forms of habeas corpus
B. orders
C. courts
D. court officials

_____31. The power of judicial review is the power to:
A. try cases that have already been tried in a lower court
B. reverse the decision of a lower court
C. decide which cases will be accepted by the Supreme Court and which will be rejected
D. decide whether an act or law is constitutional
E. supervise the administration and procedure of lower Federal courts

_____32. In order for the Supreme Court to decide on the constitutionality of a law:

A. it must be requested to do so by Congress
B. it must be requested to do so by the President
C. a case involving the law must be brought before it
D. the law must have been declared unconstitutional by a lower court
E. a lower court must have refused to do so

_____33. The powers of the Supreme Court have been enlarged chiefly by:

A. amendments to the Constitution
B. precedent
C. acts of Congress
D. decisions of the state courts

_____34. The Supreme Court will not give an opinion on whether or not:

A. a certain act is against the law
B. an act of Congress is unconstitutional
C. a case is a Federal or a state case
D. a case has been tried in the wrong way
E. a proposed law would be constitutional

_____35. A United States marshal does all of the following except seeing to it that:

A. accused persons are present to face trial
B. fines imposed by the Federal Courts are paid
C. the Federal courts have the funds necessary to continue running
D. cases that are not tried correctly are appealed
E. violators of Federal law are found out

_____36. United States commissioners:

A. are attached only to district courts
B. are attached only to appellate courts
C. are attached only to constitutional courts
D. keep records of all cases
E. see to it that the judgments of their court are enforced

____37. A boy who has been caught stealing hub-caps is put on probation. The purpose of probation is to:

A. punish him
B. serve as a warning to others
C. see if he can keep out of trouble
D. allow him to work to pay his fine

TRUE - FALSE

Please write T or F in the blank at the left of each statement. If a statement is partially false consider it totally false.

____1. A justice of the Supreme Court may retire at the age of seventy with full pay after at least ten years of service.

____2. The Supreme Court keeps unconstitutional laws from ever going into effect.

____3. Cases concerning violations of state laws may be heard in either a state or Federal court depending upon whether or not it is a court of original jurisdiction.

____4. Customs cases and patent cases, when appealed, are tried in the same court.

____5. Courts of Appeals have original jurisdiction in certain cases.

____6. The marshals enforcing desegregation in the South are state officials.

____7. One may appeal to the Federal Courts of Appeals from some administrative agencies of our Federal government.

APPENDIX I

QUESTIONNAIRES (for PROGRAM classes)

(The following questionnaires were completed by PROGRAM classes. Figure shown in the parentheses indicate the number of students in the classes checking each alternative.)

__QUESTIONNAIRE__ (completed by PROGRAM groups following segment on CONGRESS)

1. Do you think the "programs" are a good way to learn? (87) Yes (9) No
(3) Undecided

2. If you think you learned better from the "programs" than you would have from the textbook, check the reasons why, below. If you do NOT think you learned as well from the "programs," place a check by the last item.

(70) having important ideas repeated in the "programs" helped fix them in mind

(52) having to write in the blanks made me read the material carefully

(26) having to write in the blanks made me understand the material better

(52) writing out important words helped to fix them in mind

(59) having to turn in the "programs" made me keep up with my assignments (as opposed to "reading a textbook chapter")

(14) other (if any, specify):

(13) I do not think I learned better from the programs than I would have from the textbook.

3. Would you learn more if you had (check one below):

(23) more time to work on the programs in class

(46) more time in class for lecture and discussion

(30) o.k. as is

4. Were you able to find the right answers to the blanks (check one below):

(54) yes, all of them

(45) yes, almost all of them

(--) no, I often could not find the words to write in the blanks

5. Did it bother you that you were not told what words should have been written in the blanks?

(21) Yes (78) No

6. Would you prefer (check one below):

(15) more discussion of the topic before you get the program

(57) more discussion of the topic after you get the program

(27) no change

IMPORTANT: IF YOU HAVE ANY OTHER EXAMS TODAY, LIST THE SUBJECT, PERIOD, AND TEACHER'S NAME ON THE __BACK__ OF THIS SHEET.

__QUESTIONNAIRE__ (completed by PROGRAM groups following segment on THE PRESIDENT AND THE NATIONAL ADMINISTRATION)

1. Do you think the "programs" are a good way to learn?

   (88) Yes (13) No

2. If you think you learned better from the "programs" than you would have from the textbook, check the reasons why, below. If you do NOT think you learned as well from the "programs," place a check by the LAST item.

   (66) having important ideas repeated in the "programs" helped fix them in mind

   (46) having to write in the blanks made me read the material carefully

   (28) having to write in the blanks made me understand the material better

   (49) writing out important words helped to fix them in mind

   (57) having to turn in the "programs" made me keep up with my assignments (as opposed to "reading a textbook chapter")

   (7) other (if any, specify):

   (15) I do not think I learned better from the programs than I would have from the textbook.

3. Would you learn more if you had (check only ONE below):

   (26) more time to work on programs in class

   (44) more time in class for lecture and discussion

   (31) o. k. as is

4. Would you prefer (check only ONE below):

   (12) more discussion of the topic before you get the program

   (56) more discussion of the topic after you get the program

   (33) no change

5. Did you spend more time studying for the last exam than you did for this exam? (Check only ONE below.)

   (27) I spent more time studying for the last exam.

   (30) I spent more time studying for this exam.

   (44) I spent the same amount of time studying for each exam.

IMPORTANT: IF YOU HAVE ANY OTHER EXAMS TODAY, LIST THE SUBJECT, PERIOD, AND TEACHER'S NAME BELOW.

QUESTIONNAIRE (completed by PROGRAM groups following segment on
OUR FEDERAL COURT SYSTEM)

1. Do you think that having to read the textbook chapter along with completing the program helped you learn better this time than you did before, when you only had to complete the programs?

   (30) Yes (68) No (3) Undecided

2. Did you spend more time studying the textbook than you did studying the program for this exam?

   (76) I spent more time studying the program.

   (11) I spent more time studying the textbook.

   (14) I spent about the same amount of time studying each.

3. Did you find it easier to study from the textbook or from the program?

   (9) I found it easier to study from the textbook.

   (84) I found it easier to study from the program.

   (8) I found it just as easy to study from the textbook as from the program.

   Please give reason(s) for your answer to #3 above:

4. Even though you were not required to read textbook chapters for the units on CONGRESS and the PRESIDENT AND THE NATIONAL ADMINISTRATION, did you read the textbook anyway for these first two units?

   (93) No, I did not read the textbook at all for the first two units.

   Yes, for the unit on CONGRESS I read:

   (--) all of the textbook chapter on CONGRESS

   (1) more than half of the textbook chapter on CONGRESS

   (7) less than half of the textbook chapter on CONGRESS

   If you would like to comment on the way you used the textbook for the unit on CONGRESS, please do so here:

   Yes, for the unit on the PRESIDENT AND THE NATIONAL ADMINISTRATION I read:

   (--) all of the chapters on the PRESIDENT AND THE NATIONAL ADMINISTRATION

   (1) more than half of these chapters

   (7) less than half of these chapters

   If you would like to comment on the way you used the textbook for the unit on the PRESIDENT AND THE NATIONAL ADMINISTRATION, do so here:

IMPORTANT: PLEASE ANSWER THE QUESTIONS ON THE OTHER SIDE OF THIS SHEET.

Concluded: QUESTIONNAIRE completed by PROGRAM groups following segment on
OUR FEDERAL COURT SYSTEM)

5. Did you come to like the programs better or less since you began using them?

_(69)_ liked them better

_(7)_ liked them less

_(27)_ no change

6. If you have any other exams today, list the subject, period, and teacher's name below:

7. Please suggest any changes in the ways you could learn with programs (having to do with either the way the programs are written or the way they were used).

8. Would you like to continue using the programs for the rest of this course, or would you rather go back to using the textbook?

_(89)_ continue using programs

_(11)_ go back to the textbook

QUESTIONNAIRE (completed by PROGRAM groups as a follow-up to the questionnaire administered after the segment on OUR FEDERAL COURT SYSTEM)

We would like to estimate the amount of time students spent on the textbook chapter on the FEDERAL COURT SYSTEM . Please check ONE below.

(61) I did not read the chapter at all.

(9) I read less than half of the chapter.

(5) I read more than half of the chapter.

(15) I read all of the chapter.

(11) I read all of the chapter and reread parts of it.

APPENDIX J

QUESTIONNAIRES (for NON-PROGRAM classes)

(The following questionnaires were completed by NON-PROGRAM classes. Figure shown in the parentheses indicate the number of students in the classes checking each alternative.)

QUESTIONNAIRE (completed by NON-PROGRAM groups following segment on THE PRESIDENT AND THE NATIONAL ADMINISTRATION)

1. Would you learn more if you had (check only ONE below):

(15) some time to read the textbook in class

(24) more time in class for lecture and discussion

(22) o. k. as is

2. Would you prefer (check only ONE below):

(10) more discussion of the topic before you read the textbook

(38) more discussion of the topic after you read the textbook

(13) no change

3. Did you spend more time studying for the last exam than you did for this exam? (Check only ONE below.)

(13) I spent more time studying for the last exam.

(27) I spent more time studying for this exam.

(21) I spent the same amount of time studying for each exam.

IMPORTANT: IF YOU HAVE ANY OTHER EXAMS TODAY, LIST THE SUBJECT, PERIOD, AND TEACHER'S NAME BELOW.

QUESTIONNAIRE (completed by NON-PROGRAM groups following segment on OUR FEDERAL COURT SYSTEM)

1. Have any of the students in the government classes that have been using "programed-learning booklets" told you about them?

   (34) Yes (27) No

2. Have you seen any of these "programed-learning booklets" that some of the other government classes have been using?

   (30) Yes (31) No

3. If you have seen them, do you think you would like to use them? (Don't answer if your answer to #2 was No.)

   (17) Yes (13) No

4. Have you been able to borrow any of these "programed-learning booklets" from your friends in the other government classes?

   (9) Yes (52) No

5. If you have been able to borrow some of them, do you think they have been helpful to you? (Don't answer if your answer to #4 was No.)

   (6) Yes (3) No

IMPORTANT: IF YOU HAVE ANY OTHER EXAMS TODAY, LIST THE SUBJECT, PERIOD, AND TEACHER'S NAME BELOW.

QUESTIONNAIRE (completed by NON-PROGRAM groups as a follow-up to the questionnair
administered after the segment on OUR FEDERAL COURT SYSTEM)

We would like to estimate the amount of time students spent on the textbook chapter on the FEDERAL COURT SYSTEM. Please check ONE below.

(23) I did not read the chapter at all.
(15) I read less than half of the chapter.
(7) I read more than half of the chapter.
(1) I read all of the chapter.
(1) I read all of the chapter and reread parts of it.

APPENDIX K

SAMPLE OF MULTIPLE-CHOICE PROGRAMS

(The following are sample pages from the multiple-choice programs used in the Spring 1962 tryout.)

Members of the House legislative committees are chosen by a committee of each party. If the Democrats hold three-fourths of the seats in the House, and there are twenty members of a certain committee, in addition to the chairman, then the chairman plus three-fourths of the committee members, or fifteen, will be Democrats.

The Legislative Reorganization Act of 1946 also limits congressmen to one committee each, with few exceptions. The chairmanship of a committee goes to the majority party member with the longest continuous service on the committee. This is the "seniority rule" and applies to the ranking of all committee members. This means that a new Congressman, no matter how able he may be, has no chance to become a chairman of a committee or even to get a very high place on the committee. On the other hand, an incapable committeeman may become chairman of an important committee simply because he has been a member longer than anyone else in the majority party. Indeed, he may be completely opposed to the principles of his party and yet have a powerful influence over legislation because of his position. A Congressman could, for example, be chairman of the Foreign Affairs Committee and be opposed to the whole principle of international co-operation. Through his position he could block steps toward greater international understanding. Naturally, this situation is not the rule.

The chairman of a committee is always the majority party member:

A. with the most total years of service in the House

B. with the most total years of service on the committee

C. who has been serving longest in the House without interruption

D. who has been serving longest on the committee without interruption

E. with most experience in the field the committee is dealing with

In Southern states where only Democratic candidates are elected, the same Congressman may be re-elected for many years. This gives him an excellent chance to

A. avoid membership on a legislative committee

B. become chairman of a legislative committee

C. serve on several legislative committees

D. form a legislative committee for any bill in which he is interested

The chairman of a committee is always the majority party member who has been on the committee longest without any interruption of service. This gives the Southern Congressmen, who are likely to have been re-elected many times because only Democrats have much chance of being elected in the South, an excellent chance to be chairmen of committees.

(TEXT CONTINUES HERE)